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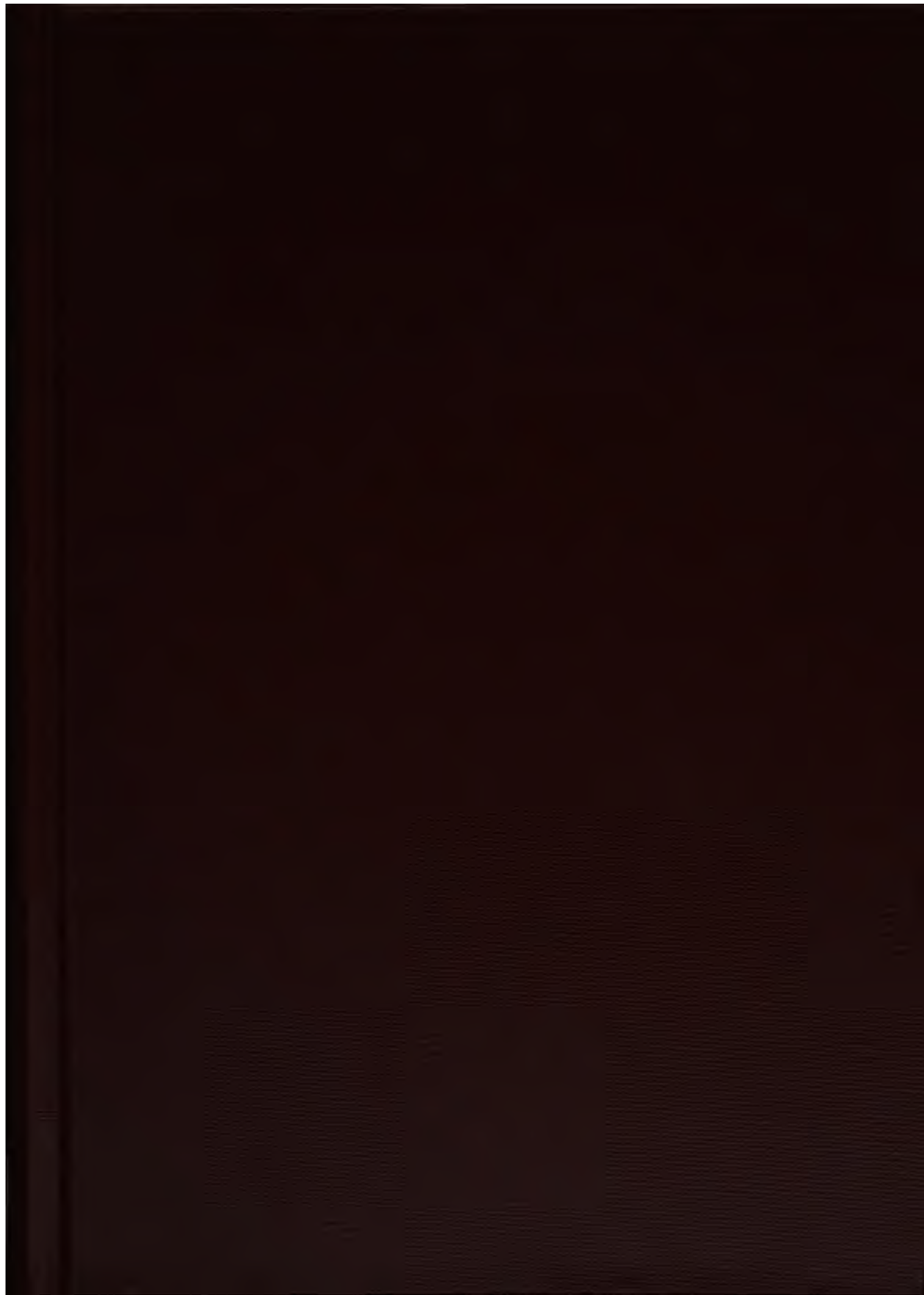
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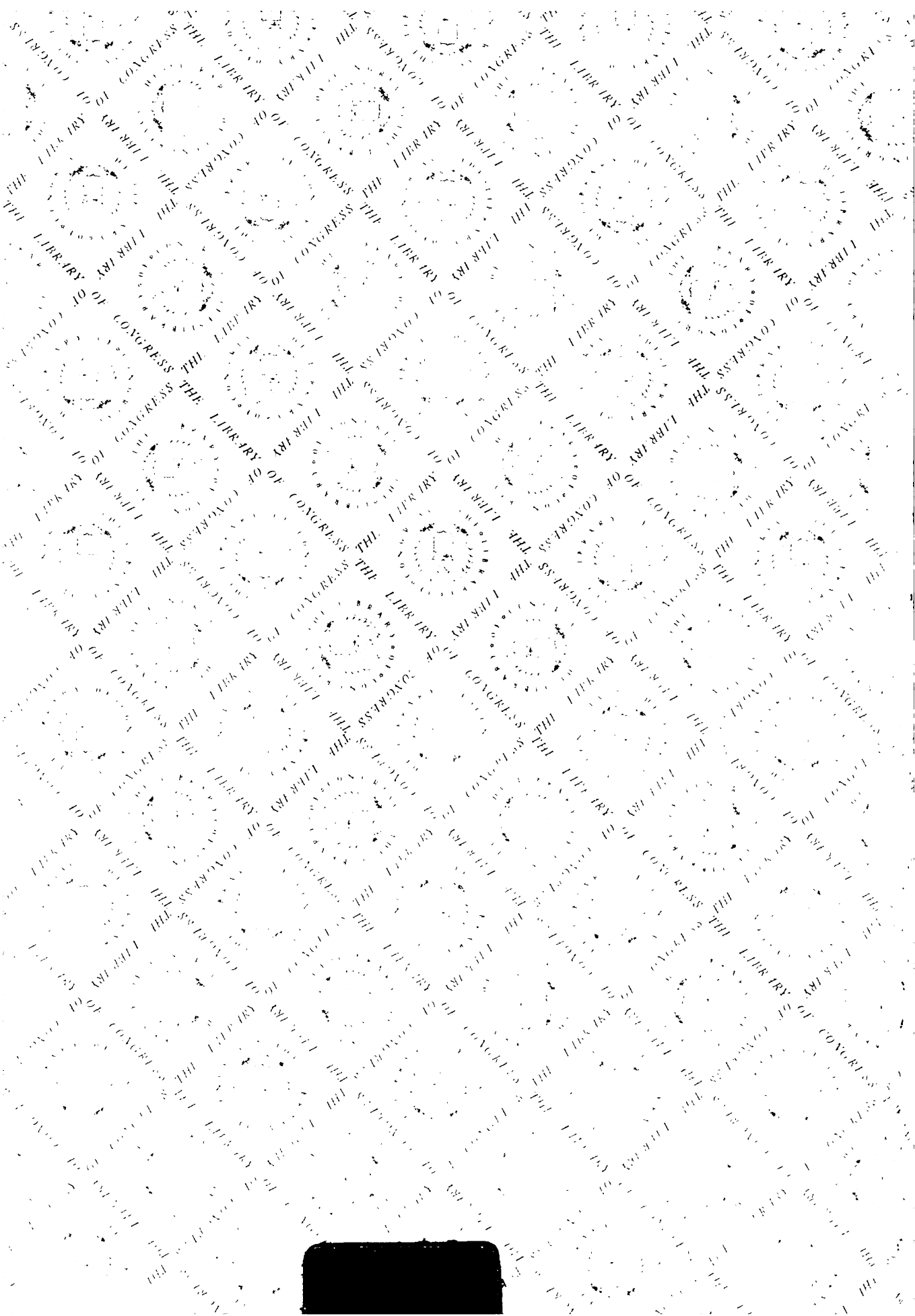
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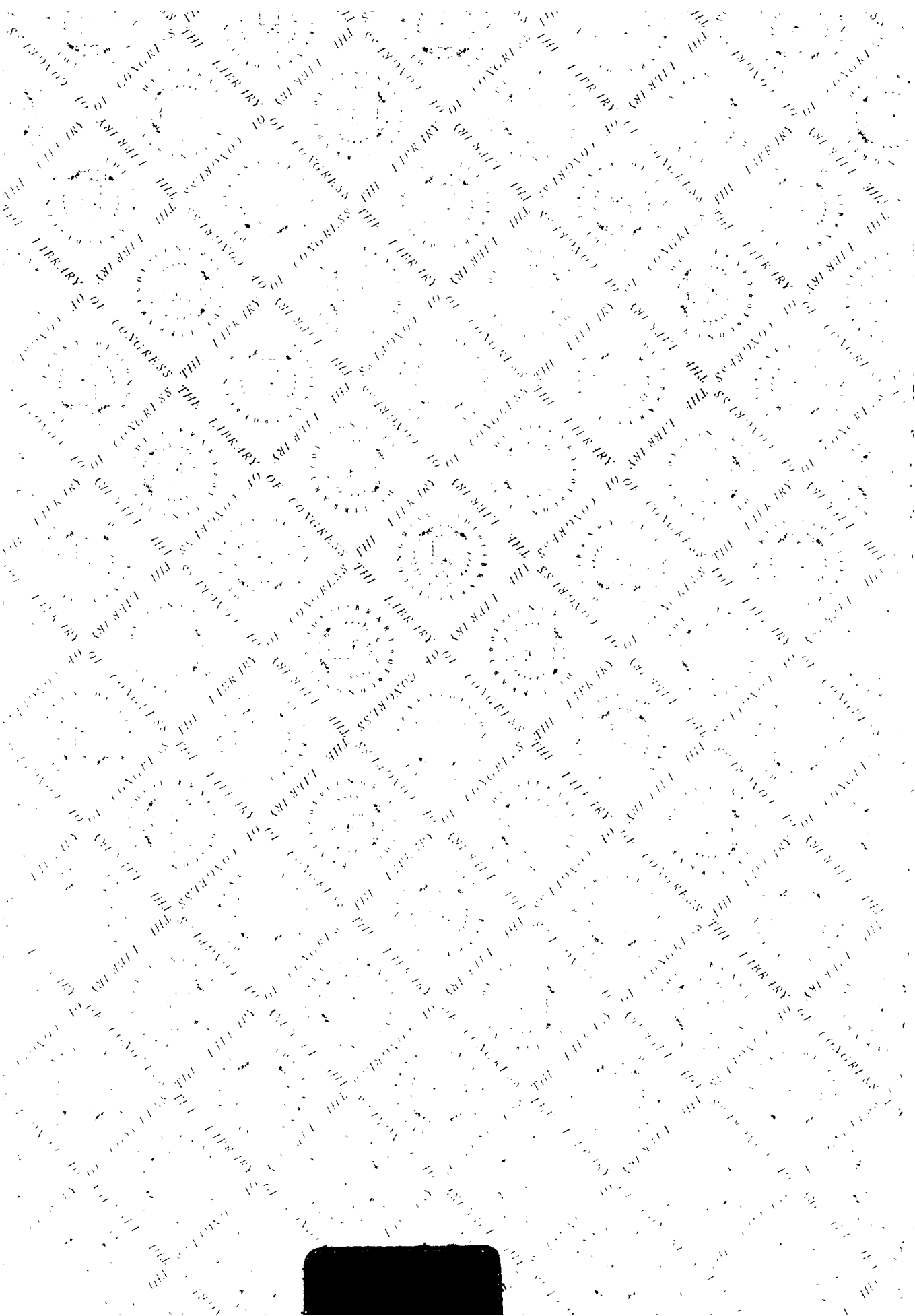


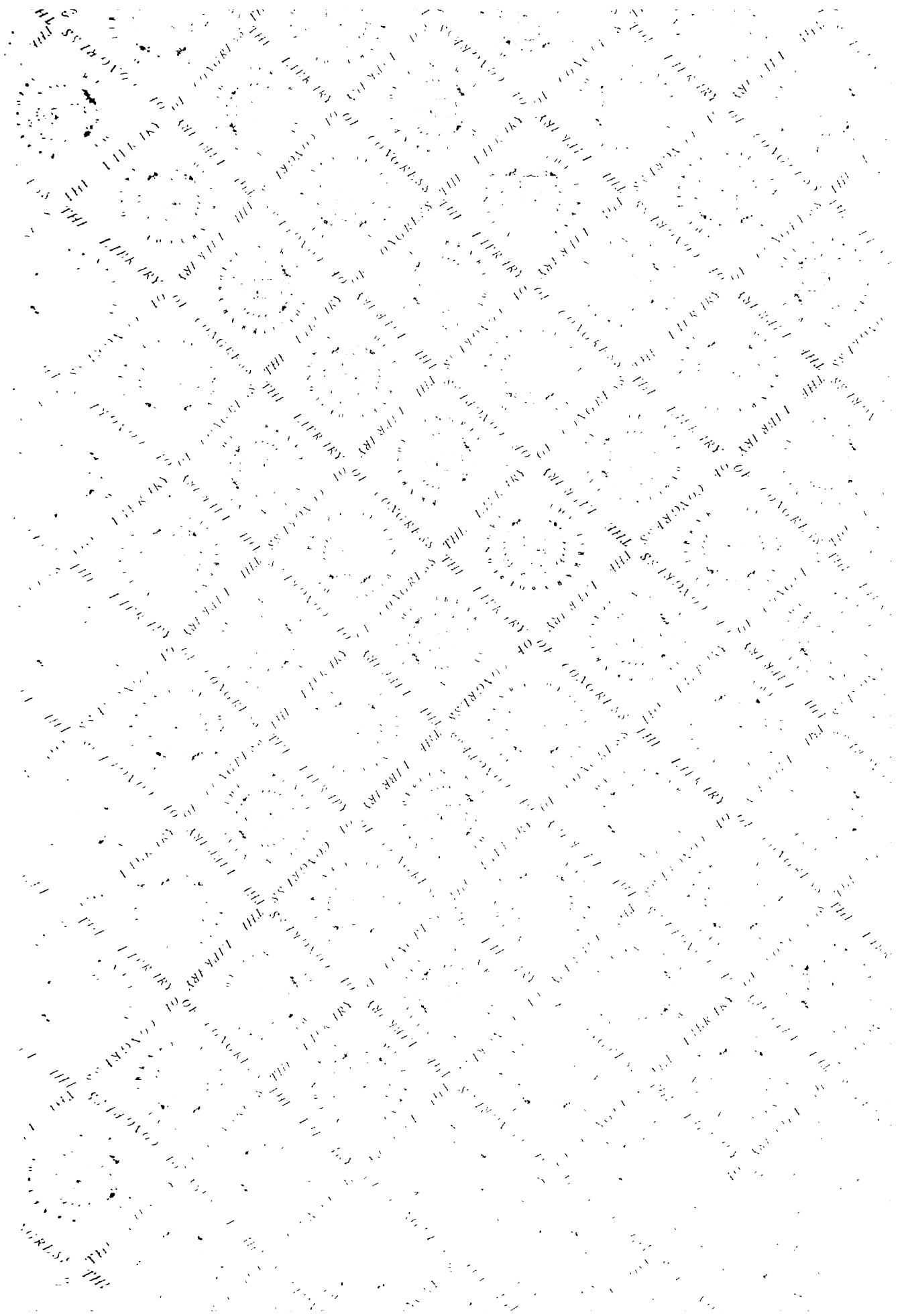
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THE
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THE FLOWER GARDEN, by Mr. G. Abbey, Stansty Hall; and Mr. F. Chitty, Uplands, &c.

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TO OUR READERS.

“WHEN I look through the Numbers of 1864 I am bold to say they are as good, or better, than their predecessors.” This verdict of our Chaplain, “THE WILTSHIRE RECTOR,” is sustained by more evidence than we need record; and it makes us pause to consider, as a guide for the future, why our pages in the Volume to which our present Address is prefixed deserve the gratifying praise.

One reason is very patent—our standard contributors have written as ably as heretofore, and many others, fresh and well-skilled, have enrolled themselves among our pensmen.

Another reason is also manifest. All the contributions have been based upon the sound practical knowledge of the respective writers. All have related to subjects of interest to one or more classes of our readers, and all have had for their aim the improvement of practice or the acquirement of truth.

A third reason is, that even in controversy a spirit of kindness and courtesy has been maintained. All seem to have been animated by the just conviction that an opponent has as much right to entertain an opinion as he has whom he opposes, and that he need not have his face scratched to make him feel that he is wrong.

May these characteristics which have earned for this Journal approbation and success in 1864 be maintained and intensified in 1865; and when this year's days are concluded, and our first Number of its successor appears, may it bear as its introduction an address as kindly-spirited and truthful from the same friendly heart.

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WEEKLY CALENDAR.

Day of Month.	Day of Week.	JULY 5-11, 1864.	Average Temperature near London.			Rain in last 37 years.	Sun Rises.		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock before Sun.	Day of Year.
			Day.	Night.	Mean.		m.	h.	m.	h.	m.	h.	m.	h.			
5	Tu	St. John's Wort flowers.	77.8	51.0	64.2	16	52	af 8	17	af 8	37	5	39	8	1	m. 8	187
6	W	Glowworm shines.	76.1	51.2	63.6	16	53	3	16	8	41	6	4	9	2	4 23	188
7	Th	Smooth Meadow Grass ripe.	73.5	51.7	62.6	20	54	8	16	8	45	7	28	9	3	4 38	189
8	F	Young Partridges fledged.	74.1	50.2	62.1	19	55	8	15	8	48	8	40	9	4	4 47	190
9	S	Everlasting Pea flowers.	73.7	50.1	61.9	17	56	8	14	8	52	9	9	10	5	4 56	191
10	Sa	7 SUNDAY AFTER TRINITY.	74.4	50.7	62.5	15	57	2	13	8	56	10	19	10	6	5 5	192
11	M	Wild Basil flowers.	74.6	51.1	62.9	10	58	8	12	8	after.	52	10		7	5 13	193

From observations taken near London during the last thirty-seven years, the average day temperature of the week is 74.8°, and its night temperature 50.9°. The greatest heat was 97° on the 5th, 1862; and the lowest cold, 36°, on the 7th, 1869. The greatest fall of rain was 1.67 inch.

THE CHISWICK GARDEN OF THE ROYAL HORTICULTURAL SOCIETY.



ONDAY, the 27th of June, was a great day for the old garden at Chiswick; and no one came away from it without a feeling of regret and indignation at the neglect with which it is treated by the

present management of the Society. No one could walk amongst the ornamental trees now attained to a noble growth, and now showing fully the taste which dictated their arrangement, without expressing the anger that is felt for men who are lavishing thousands of pounds upon the gew-gaw garden at South Kensington, whilst upon these noble grounds at Chiswick the same management declared that the Society could not spare "ten pounds" more! The fact makes one pause in writing the words, and think a second time whether such a perversion can be, and that the horticultural Fellows do not gather together and resolve that such a perversion shall not be. It would be no idle resolve, be it remembered; but we believe that they hesitate, hoping that the management will take to a course more consistent with the objects of a Horticultural Society.

Among these objects is the increase of a knowledge of fruits and their cultivation—and at Chiswick the Society has to operate with the most complete collection of Apples, Pears, and Grape Vines that exists in Europe. Its noble vineyard and the excellence of the Vines within it are worth a day of railway travelling to inspect.

To be able to exhibit all this, and much more which we need not detail, was a triumph for the Chiswick Garden, for every one of the fifteen hundred who visited it that day felt how it towered above its disproportionately pampered competitor at Kensington. That number—1500 visitors—should speak with a trumpet tongue a lesson to the Society's managers. Of that number, 1360 were Fellows of the Society and their friends. Now, if this Strawberry Fête had been advertised as the fêtes at Kensington are always advertised, how many more hundreds of the public would probably have attended? Why was it not more publicly announced? Why was a less powerful band engaged than is engaged for the Kensington fêtes? If it was to obtain evidence that the Chiswick Garden is less attractive than the garden at Kensington, that intention was abortive, of which no better evidence is needed than the joyous groups assembled there compared with the formal, dressed-for-display throng at Kensington.

Quite sure are we that the Fellows who were at

Chiswick that day would record their votes, not only for more such assemblings there, but that the expenditure upon the garden shall be more liberal; that its turf and other parts of the ground shall be kept in good order worthy of what should be the model Society of Horticulture; and then those Fellows might be content to allow some of the glass structures to remain as they all are at present—mere propagating and nursing places for the plants to furnish the beds and borders at Kensington.

MY ORCHARD-HOUSE.—No. 4.

A LEARNED friend who has written an extensive work on the Channel Islands, and who is an excellent authority on the matter, having resided in Guernsey for several years, in describing the climate of these islands represents them as being the "chosen battle field" for all the winds under heaven. The whole group lies in such a way off the main continent, that every fierce blast from the vast Atlantic Ocean meets a corresponding storm from the land, exactly at the spot where these favoured isles are placed.

Guernsey has, however, the distinction of a bad pre-eminence even here, while it frequently appears to me that our front walk, near which the orchard-house stands, is selected above all other spots in the island as that where furious storms most love to contend. On the 1st of January, 1861, about two-thirds of our orchard-house fell suddenly, as if a shell had exploded therein, under the violence of one of these gales, with a pressure of what seemed to me of about a hundredweight to the square foot! As no one would venture in, all the trees were crushed and the pots smashed, while the rafters fell among our Rose trees, levelling these at once. It was a sad sight for me, and it needed all my love for the work and conviction of its utility, even as a model and school for others around, to reorganise the house afresh.

A clerical brother quaintly reminded me, that "it was not a gin palace I was building, but a suggestive and useful structure." The house was accordingly rebuilt, the mutilated trees sprang up afresh, new plans were adopted, everything was on a better scale, and I have never regretted doing so.

When I think how many have profited by inspecting the work, and that I am able, I trust, to contribute something towards my brother amateurs by describing matters exactly as they are with me, it is impossible not to feel gratified. Orchard-houses seem especially adapted for amateur fruit-growers. More can be learnt in them in one year than in, perhaps, ten out of doors. And among other things it must not be forgotten, that time is to us all that which is most precious. Let us, then, be ever ready to contribute towards another's innocent pleasures, so few in this world; and let us shun all bitterness of expression, in gardening matters especially.

The continual strong breezes and generally cold weather of the last fortnight have been very trying to vegetation. Tender bedding plants, such as *Amaranthus melancholicus*

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ruber, have been with us destroyed by the hundred. The wall Peaches look much injured; even standard hardy Pear trees have suffered, but under glass we have none of this, except that the season for gathering the fruit will not be so early as seemed likely during that wonderful May.

Peaches are colouring fast and are large. Apricots are ripe with us. De Milan, the earliest full-sized Apricot, was, however, ripe last year a week before this. The extreme heat of May obliged us to give much water to the roots, and, probably, they are somewhat chilled and the tree put back from this cause. I regret now that tepid water was not given, as it is a great object to forward these trees. Early Favourite Plum is ripe. Doyenné d'Été Pear is about 2 inches in length.

Is it of any use to my brother amateurs to note the following? It seems to me that it would be very interesting for some northern amateurs to forward us southerners the sizes of the fruit in some of those decried houses. Comparisons would not be odious in this case, for we must be at least ten days in advance in ripening power.

I have never before seen that best of early Peaches, Early York, so fine as at this date. Some fine specimens from half a dozen trees are nearly 6 inches in circumference, though Early York is but a medium-sized Peach. Something as early, as good, and full-sized would, indeed, be an acquisition. Canary comes near to it in excellence, it is a heavy cropper, of a lovely yellow, forming with Early York and Golden Purple, another rather late and singularly and beautifully-streaked Peach, such a triad as rejoices the amateur who has pleasure in colour. Early Crawford is about the size of Early York at present. Rivers's Orange Nectarine, of which we have some twelve trees, is 4½ inches in diameter; Violette Hâtive about the same; Hunt's Tawny, a little larger; Downton, 5 inches in circumference. Chauvière, a very excellent bearer, and Stanwick, two of the very best Nectarines, are 5½ inches; while Exquisite and Galande (French) Peaches are 6½ inches in circumference. De Milan Apricot is 5½ inches, and De Coulange 5 inches. The Peach Apricot and Kaisha are smaller. On these trees the crops are very heavy, about one hundred on one of them, and this makes them smaller this year.

It must be a mistake to try to grow quantity at the sacrifice of quality in orchard-houses, and wherever this is done the fault will soon show itself in the loss when sent to market, or in the next year's produce.

But I must resume the consideration of the other classes of Peach shoots. In the preceding paper we had discussed two classes and now arrive at a third, which is of rather a puzzling character. This class will be met with along the branches, more or less, at about their central portions of extension. They are slender, from 6 to 8 inches in length, and present the disagreeable phenomenon of an unusually large number of fruit-buds unaccompanied with leaves. There are, however, some very small buds visible near the bases of these slender shoots which are not fruit-buds, but they are dormant.

For summer pruning under glass we can dispose of this difficulty without much risk. If there is time to recognise the peculiar character of the shoot it would be proper to pinch to three leaves, instead of to four at the first pinching-in, but it does not matter much.

Some pruners in the autumn, out of doors, would cut back to the small buds at the base of the shoot, having no expectation of fruit from them. Others would treat them as fruit-bearers, and cut-in to 4 inches for this purpose; but in the summer orchard-house pruning, which alone is now the question, it will be well to pinch-in a little more closely these shoots. By this means they will be closer to the branch (always a great object in a small space), and by the stimulating influence of the concentrated heat they may bear and grow too.

It seems unfair to expect the same slender shoot to bear fruit and to extend itself much. It is always better to have a certain number to select from. Some should bear, others should extend and ripen for the next season. Those which have borne their fruit should then be cut back below the spot where that fruit was grown, directly after it has been gathered in the autumn. The buds at the base will thus be stimulated by the sap being now directed to them. What they accumulate in the autumn is thus most precious for

the following spring. After a few seasons much becomes clear to the pleasing observer, and yet each succeeding year he will be reminded by mistakes and failures that gardening in its various branches is, indeed, an art, and he will be led to study the works of those scientific men who have done so much for him and his pleasures.—T. COLLINGS BRÉHAUT, *Richmond House, Guernsey.*

THE ROYAL HORTICULTURAL AND NATIONAL ROSE SHOW.

THIS was held at South Kensington on Wednesday and Thursday last, and never has it been our lot to see a finer display of old England's national emblem. Stand after stand, filled with the finest blooms from all the southern parts of England, and some from the north, extended in a close and in some places double line the whole length of the conservatory arcades, affording to the view a glorious display of the richest colours, and filling the air with a delicious perfume. The day being fair, though not so bright as one expects at the end of June, the attendance of visitors was very numerous, so much so as to render it almost an impossibility to get near the tables, especially where the nurserymen's collections were situated; and it was pleasing to observe the evident interest taken in the merits of the respective stands, and of the several varieties of which they were composed.

The first Class was for seventy-two kinds, one truss of each; a great improvement over the old and almost unmanageable Class of ninety-six. Here Messrs. Paul & Son were first with magnificent blooms, among which we particularly remarked Madame Charles Wood, Charles Lawson, Madame C. Crapelet, General Washington, Lælia, John Hopper, Victor Verdier, Pairo de Terre Noire, Hamlet, Clivier Delhomme, Lord Canning, Professor Koch, Prince Camille de Rohan, Gloire de Santenay, Gloire de Dijon, Narcisse, and Madame Eugène Verdier.

Mr. Cant, of Colchester, was second, and Mr. W. Paul third, the competition in the case of all three exhibitors being very close. Of Mr. Cant's, Monte Christo was noticeable on account of its blackish purple colour, Madame Callat as a fine bright cerise, Maurice Bernardin for its fine colour, besides which there were fine examples of several of the kinds already named. Queen Victoria from Mr. W. Paul, white, slightly shaded with pink, and Princess of Wales, as a fine bright crimson, were remarkable for their beauty; to these must be added Charles Lefebvre, Beauty of Waltham, and a host of better-known kinds. Mr. Mitchell, of Pilt-down Nurseries, Maresfield, was fourth; Mr. Keynes and Mr. Cranston also showing fine stands.

In Class 2, forty-eight kinds, three trusses of each, Mr. Turner was first with fine examples of Charles Lawson, La Reine, Queen Victoria, Louis XIV., Duchesse d'Orléans, Victor Verdier, La Ville de St. Denis, Sénateur Vaisse, Anna de Diesbach, Gloire de Dijon, Souvenir de Malmaison, and others. Messrs. Paul & Son were second, Mr. Keynes third, and Mr. Cant fourth.

The next, Class 3, was for twenty-four kinds, three trusses of each, and in it Mr. Keynes took the first prize with beautiful blooms of Charles Lefebvre, Madame Furtado, Madame Charles Wood, La Brillante, Olivier Delhomme, Maréchal Vaillant, François Lacharme, John Standish, and Mademoiselle Bonnaire. Messrs. Paul & Son were second, Mr. Cant third, Mr. Turner and Mr. Fraser being fourth.

In Class 4, twenty-four kinds, single trusses, Mr. Turner was first, Mr. Keynes second, Mr. Cant third, and Mr. Fraser fourth. In the different stands were some excellent examples of Lælia, Madame C. Wood, Charles Lefebvre, Madame C. Crapelet, Vicomtesse de Cazes, Madame Bravy, Clement Marot, and many others.

In the Amateurs' Classes, J. Hedge, Esq., of Reed Hall, Colchester, was first both in forty-eights and twenty-fours, showing, among others, fine trusses of Souvenir d'Elise Vardon, a splendid cream white; Rubens, white, shaded with rose; Comte de Paris, a superb white, all belonging to the Tea class; Madame Masson, Noisette Celine Forestier, Madame Boll, Charles Lawson, and L'Enfant Trouvé. Mr. Moffat, gardener to Viscount Maynard, Dunmow, was second for forty-eight, Mr. Ingle third, and Mr. Exall, gardener to

J. Hollingworth, Esq., was fourth. For twenty-fours, C. Worthington, Esq., Caversham Park, Reading, was second, Mr. Krell, third, and Mr. Ingle fourth.

For eighteen kinds, the Rev. V. Knox Child was first with a fine stand, Mr. Plester second, E. B. Postans, Esq., third, Dr. Cooper, Slough, fourth; and the Rev. H. Helyar, Penderome Rectory, Yeovil, had an extra prize. All these exhibitions consisted of good blooms, and many of the trusses were very fine.

The Rev. V. Knox Child was again first in twelves; Mr. Churchfield, gardener to E. L. Charrington, Esq., Carshalton, second, and Dr. Cooper third.

Class 9 was for eighteen new Roses of 1863 and 1864. Mr. Keynes was first, Mr. Fraser second, Mr. W. Paul third, Messrs. Paul & Son fourth. Prominent among the kinds shown were Princess of Wales, Lord Macaulay, Lord Herbert, John Hopper, a fine violet purple seedling from Mr. Wm. Paul, Baron Adolphe de Rothschild, a fine fiery red, shown by all the competitors; Alba Rosa, white, with rose centre, the finest white Tea Rose which has appeared since Devonensis; Alfred de Rougemont, a large crimson purple; Le Baron Rothschild, carmine centre, shaded with violet towards the outside; and Le Rhône, rich vermilion. Madame Souper, white, with flesh centre, also seemed a very desirable white Hybrid Perpetual; Emotion (Bourbon), white, more or less tinged with rosy pink, was very pretty in colour; and Louise Margottin, rose, was very desirable. Some beautiful blooms of this, from Mr. Fraser, were placed first in Class 10 for the best twelve trusses of any new kind of 1863, Mr. W. Paul taking the second prize with Lord Macaulay.

For twelve trusses of any kind, Mr. Keynes was first with Charles Lefebvre (magnificent), Messrs. Paul & Son second with Mrs. Rivers and Comtesse de Chabillant, Mr. Hedge fourth with the same kind, and Mr. Ingle third with Prince Léon. The first prize for the best twelve trusses of yellow Roses, not less than six kinds, was adjudged to Mr. Hedge. These consisted of Jaune of Smith, Celine Forestier, Aurora (very beautiful), Narcisse, Solfaterre, Triomphe de Rennes, Cloth of Gold, Louise de Savoie, Vicomtesse de Cazes, Isabella Gray (a beautiful deep yellow), and Enfant de Lyon. Messrs. Paul & Son and Mr. Cant took the remaining prizes in the order in which they are named.

Classes 13 and 14 were for Tea-scented and Noisette Roses, and the trusses exhibited comprised good examples of nearly all the best varieties, while the perfume they exhaled was delightful. Mr. Hedge was first, Mr. Worthington second, and Mr. Ingle third among Amateurs; Messrs. Paul & Son, Mr. Cant, and Mr. W. Paul holding the same relative positions in the Nurserymen's Class.

Class 15 was for single blooms of twelve distinct kinds, and here remarkably fine blooms were exhibited by Mr. Keynes and Mr. Turner, also by Mr. Cant and Mr. Hedge. Celine Forestier, Madame Furtado, Charles Lefebvre, Sénateur Vaisse, Madame C. Crapelet, Lælia, and La Reine may be particularised as a few of the finest, and Gloire de Dijon was magnificent.

A few competitors came forward for the prizes offered for decorated baskets or vases of Roses. By far the best came from Mr. W. Adcock, gardener to Mrs. Forbes, Petersfield, and from the simplicity of the materials employed it was particularly deserving of credit, as well as for the good taste, which avoided anything like overloading with flowers—a fault which was very apparent in the other designs. It was made something after the form of March's stands, the base being of moss, with a few Ferns and Grasses appearing to grow out of it; and the stem, which was, in fact, merely a crooked stick, was covered with moss, and supported a circular stand covered with moss, in which Roses were bedded (and not too many of them), a cluster of Rose-buds with the stalk and foliage forming the centre. Mr. Turner was second with a simple stand, in which *Isolepis gracilis* was employed with good effect; and Miss Wint third, with a basket supported by an imitation rough glass rock, with Ivy, Ferns, and Roses at its base, and beneath which was spread an anti-macassar, which would have been far better dispensed with.

Class 17 was for six bouquets of distinct kinds. Mr. Hedge was first with Comtesse de Chabillant, Sénateur Vaisse, Madame Boll, Madame Bravy, Madame Vidot, and L'Enfant

Trouvé; Mr. Turner second; and Mr. W. Paul third. Madame Furtado and Prairie de Terre Noire from the latter, were very fine, as indeed were the whole of those exhibited by the prizetakers.

Moss Roses, as shown, lost much of their principal attraction, the mossy covering being to a great extent hidden by the blooms. It is questionable whether they would not have been seen to greater advantage had they been shown in three trusses of a kind, and with an interval between each kind. Messrs. Paul & Son were first, Mr. W. Paul second. The varieties were the Created, White Bath, Baronne de Wasse-naër, Gloire des Mosseux, Common, Nuits de Young, a dark purple, Julie de Mersent, and Lanei.

For the best three trusses of Hybrid Perpetuals Mr. Keynes was first, with immense trusses of Charles Lefebvre, the blooms measuring between 4 and 5 inches across, and the wonder of all who saw them. Mr. Cant was second with the same kind almost as large, and first for the best three trusses of Tea Roses with Souvenir d'Elise, Mr. W. Paul being second with Madame Villermoz.

In pot Roses Mr. Turner and Messrs. Paul were first and second, Mr. W. Paul third. Among them were Caroline de Sansal, a good summer pot Rose; President, fine; Gloire de Santenay, Souvenir de la Reine d'Angleterre, an effective autumn pot Rose; Lælia, La Reine, La Brillante, Gloire de Dijon, Modèle de Perfection, Orderic Vital, pretty in colour; Madame Furtado, &c.

For new Roses in pots Mr. W. Paul stood first, Messrs. Paul & Son second. Among those of the former, the best were Alphonse Damaizin, scarlet purple; Alba Rosa, one of the finest Tea Roses; Professor Koch, a very fine shaded crimson; Madame Caillat, with large smooth petals of great substance; Beauty of Waltham, Charles Lefebvre, Olivier Delhomme, fine colour, purplish red; François Lacharme, exquisite in form; and Emile Dulac, a fine lilac rose.

Messrs. Paul & Son, besides several of those already referred to, had La Brillante, very good; Maurice Bernardin, fine; Le Baron Rothschild, already noticed as one of the best of the new varieties; and Madame Wm. Paul.

Of miscellaneous objects some good wax flowers, of which the Roses were the best, came from Mrs. Mitchell, Wandsworth Road; *Lilium auratum* from Messrs. Veitch; plant cases from Messrs. Barr & Sugden; and, finally, a Coconut, ripened in the Duke of Northumberland's stove at Syon, for which a first-class certificate was awarded by the Fruit Committee. It will be recollected that this nut was set and began to swell under the management of Mr. John Smith, now Curator at Kew, and its maturation has taken place under the eye of Mr. Fairbairn, who is the present gardener.

FLORAL COMMITTEE, JUNE 29TH.—The great Rose Show was held on this day at the South Kensington Gardens. A Sub-Committee was summoned to inspect such new plants and florists' flowers as might be sent for examination, the introduction of which added much to the interest of the Exhibition.

Mr. Hally, Blackheath, sent several scarlet Pelargoniums. Enamel, a pleasing variety, pale rosy salmon trusses, with dark zone on bright green foliage, received a commendation; Red Riding Hood, distinct white eye, bright scarlet flowers, medium truss, broad zone on dark green foliage, very dwarf habit—second-class certificate; Queen Mab, too much resembling Adonis; and Goliath, a coarse-growing plant with variegated foliage.

Mr. Bull, Chelsea, sent a collection of scarlet Pelargoniums, impressing the Committee with the idea that they were all seedlings. A selection of the following sorts was made, but the Committee do not recognise them as seedlings, as the names of some of them appear in the catalogues of 1864:—Rosamond, pale salmon, new in shade of colour, zonate foliage, fine truss—second-class certificate; Madame Rendatler, deep rose, compact truss, fine form, slightly zonate—first-class certificate; Faust, fine truss of intensely deep scarlet flowers, zonate foliage—first-class certificate; Hector, deep rose, fine form—first-class certificate; No. 10 Psyche, pale salmon, centre shaded to white, small truss but fine petals, zonate foliage—second-class certificate. There were many other beautiful varieties in this mixed collection: Clipper, a fine flower, which received a first-class

certificate on a previous occasion; Achilles, a second at the last meeting; Persian, a delicate pale-shaded scarlet; Rose Bendater, Eve, Fanny, &c. From Mr. Bull also came *Canna nigricans*—first-class certificate; *Geonoma Ghiesbreghtii*—first-class certificate. Mr. Bull sent also three seedling *Mimulus*.

From T. Laxton, Esq., Stamford, came *Fuchsia Harlequin*, pale pink corolla striped with purple, and *Othello*; neither of them were in any way novelties.

From Messrs. Downie, Laird, & Laing came *Verbena Sir G. Musgrave*, a dwarf-habited scarlet; truss average; flowers not first-rate in form; colour not equal to Lord Leigh and others of that class.

Mr. Wm. Paul exhibited several seedling Scarlet *Pelargoniums* of the Nosegay section, these seedlings being results of the perseverance of the late indefatigable and enthusiastic florist, Mr. D. Beaton. There is a decided novelty in their colour and style which will render them indispensable in every collection. They are but the first fruits of careful hybridising, and we may reasonably expect further progress. Some of these seedlings have much broader petals than the usual Nosegay section, such as *Stella*, *Merrimac*, &c.; but that by no means gives a coarseness to the truss, although it would almost constitute an intermediate position between the broad-petalled section and the Nosegays. *Amy Hogg*, light rosy purple, very large, fine truss standing well above the foliage, which is slightly zonate; this variety is quite new and distinct in colour; as a bedding plant it will be invaluable; it was the admiration of all who saw it—first-class certificate. *Rebecca*, rosy scarlet, broad petals, fine truss, distinct and new in colour; a most useful variety for bedding purposes—first-class certificate. *Beauty of Waltham*, darker shade of colour, fine flower, medium truss—second-class certificate. *Glowworm*, quite a novelty, with bright scarlet upper petals, the lower deep carmine. The trusses of this seedling were thin. If this plant can be grown stronger it will not be surpassed by any other Nosegay. Beaton's *Indian Yellow*: this, again, though quite novel in colour, in its present state did not produce sufficiently large and compact trusses, the essential qualification of this section of *Pelargoniums*. *Orange Nosegay*, had the same deficiency as the last two. Some of these seedlings will doubtless be exhibited again, when they may present an improved appearance. Mr. W. Paul also exhibited four seedling Roses:—*Globosa* (Hybrid Perpetual), a globular, compact, crimson red flower—second class certificate; *Dr. Lindley*, a shaded dark flower of very promising qualities; *Princess of Wales*, which has been much admired; and *Robusta*. The specimens exhibited were in bad condition to judge of their merits.

Mr. J. Walker, Thame, sent a collection of Sweet Williams called *Auricula-eyed*. They were very pretty, and received a special certificate.

Messrs. E. G. Henderson sent *Variegated Scarlet Pelargonium Queen of the Nosegays*; *Petunia picturata*, a white-striped variety, like many others; *Petunia gigantea plena*, a monster in size, large creamy white flowers faintly veined; *Verbena Velvet Cushion*, a most useful bedding variety, dwarf habit, dark rosy purple flowers, said to have been crossed with the old hardy garden variety *venosa*. The colour of this *Verbena* will be most telling in a mass, the foliage being very small.

From Messrs. Carter, Holborn, came *Clarkia integrifolia flore pleno*, a very beautiful and showy annual, not spoiled from its numerous petals forming what is called a double flower. It received a first-class certificate.

Mr. Townsend, Hornsey, sent three seedling plants of *Clematis lanuginosa*; but as there seemed some reason to believe that these seedlings had been before the Committee last year under different circumstances, they were consequently unnoticed until some further inquiry be made. All we can say is, they were strikingly like the seedlings exhibited by Mr. Jackman, of Woking, last year.

DOUBT AT THE LEEDS HORTICULTURAL SOCIETY.

A DISPUTE having arisen at our late Exhibition respecting a Vine that was exhibited as a "fruit tree in pot," for our satisfaction it was agreed to ask your opinion whether you

thought it eligible to compete in that class or not; and if the fruit being ripe it ought to have had the preference over a Peach tree in a pot with fruit unripe. Enclosed is our schedule.—E. F.

[The schedule has these two classes "LL. Fruit Tree in pot (bearing fruit). MM. Vine in pot (bearing fruit);" and the classes are preceded by this general rule, "All fruits exhibited must be ripe and fit for table." We consider, therefore, that the Vine with ripe fruit was entitled to the prize, the Peaches being not ripe; and we consider a Vine in pot might be exhibited in Class LL., for it is a fruit tree. There should have been the words, "Grape Vines excepted," if the Committee intended to exclude them from that class.—Eds. J. of H.]

CRYSTAL PALACE ROSE SHOW.

THE difficulty of reporting on a Rose Show with an attendance of 15,000 visitors and crinolines three deep before the boxes is a matter of no ordinary character, and I was unable until after the rush of visitors came in to get near the boxes in which the magnificent blooms contributed by our leading nurserymen were placed. When I did so the thought occurred to me, What good will it be to write down the names of ninety-six Roses? and for whose benefit will it be done? and might I not adopt some better plan for benefitting the lovers of the Rose than such a process implies? There are various classes of Rose-lovers and Rose-growers who frequent these shows or who wish to know about them. There are exhibitors who have an eye to the future, and who desire to know what Roses which they have not may be useful to add to their collection; similarly to other varieties out does not affect them provided they be good exhibition Roses. Now it is quite evident that if a Rose be a good one, a large grower and a large exhibitor will not be over-careful as to its similarity to another kind, it may be useful to him some day for making up his 96's or 48 trebles. Then, again, there is the small grower, who also desires to be an exhibitor. With him the selection must be more particular, for he cannot afford room for all, and of those sorts which are most like each other he must discard some, keeping one only out of the number. Then, the amateurs *par et simple*, who have no ambition to excel as exhibitors, love a few Roses, and love them only for their own sake. With them colour and effect are more thought of than size and shape, and a brilliant fiery crimson is much more thought of than a delicate flower which to a florist is the perfection of shape and substance.

There are some Roses which meet all such classes, there are some which do not. Thus, take such a Rose as *Charles Lefebvre*. No one can do without it—however small the collection, it must be there; while, on the other hand, when you hear *Turenne* or *E. Bourcier* is a fine Rose when you can catch it, why, the amateur cannot want to catch it. He cannot afford to give it space, and only, perhaps, get one bloom on a plant. To a nurseryman this is a matter of no moment; space to him is comparatively a trifling matter compared to the chance of getting a fine bloom some show day when he wants it very much.

Let us see how this applies in the Class of new Roses, in which Mr. Wm. Paul was first, Mr. Keynes second, and Messrs. Paul & Son third. There were in all these boxes Roses which without doubt are fine, but so like one another that amateurs would hardly care to fill their gardens with them all. Thus, *Maurice Bernardin*, *Olivier Delhomme*, *Madame Boutin*, *Mad. Julie Daran*, *La Brillante*, and others come at times so close to one another, that even an experienced Rose-grower will find great difficulty in determining the name of one of the flowers. Such a case did occur. One of our very best amateur growers had misplaced the name of one of his flowers, and brought it to one of our most successful and experienced Rose-growers in order to ascertain its name. He said, "It may be any of these, but I think it is so and so."

Of the Roses of 1861, sent out here in 1862, the following occurred in these stands, and have established beyond doubt their claim to be distinct, and will probably remain a long time on our lists. *H.P. Charles Lefebvre* (*Lacharme*), the finest crimson Rose we have, a fine grower, and of a

substance of petal quite wonderful; Due de Rohan (Leveque et fils), a noble flower of the Sénateur Vaise type, but of a somewhat lighter shade of colour; François Lacharme (Verdier et fils), brilliant carmine with a purplish shade, very globular flowers, and altogether a first-rate Rose; John Hopper (Ward), beautiful lilac rose with a rosy crimson centre, very fine, and of excellent habit; Madame Boutin (Jamin), beautiful well-formed Rose, of fine habit; Madame Caillat (E. Verdier), this Rose does not seem much known—it is not in Margottin's or Rivers's lists, but I have it very fine, and some blooms of it exhibited in the various stands were excellent—it is a bright Rose, well shaped, and very effective; Madame Charles Wood, a beautiful Rose, of large size, with large petals, and very lasting; Maréchal Vaillant (Leconte), rosy crimson, double, and well formed; Maurice Bernardin (Granger), rich crimson, at times very like others of the same style; Monte Christo (Fontaine), brilliant dark crimson, a fine and distinct Rose; Olivier Delhomme (Verdier et fils), brilliant crimson, good shape and outline—I have not found it a very vigorous grower, but it may be so; Prince Camille de Rohan (E. Verdier), a very distinct Rose, rich dark maroon crimson—some blooms looked a little too thin; Souvenir de Comte Cavour (Margottin), a beautifully brilliant dark Rose; Souvenir de Lady Easley (Guillot père), a rich rosy purple Rose; Vicente Vigier (Verdier et fils), splendid colour; Beauty of Waltham (Wm. Paul), light rosy crimson. There were other Roses of the same year in the various stands, such as Christian Püttner, Alphonse Damaizin, Emile Dulac, Madame Julie Daran, but I do not think them equal to others of the same style amongst those I have selected. And so with another Rose which it goes to my heart to say a word against for the name it bears—I mean Reynolds Hole; but although very bright and very pretty in Mr. Wm. Paul's stand, yet I fear it is too small for our present taste.

Amongst the Roses of 1862, let out here in the spring of 1863, the following were very noticeable, although I do not think that any of them were equal to Charles Lefebvre or François Lacharme; still they were very beautiful, and are Roses we must have:—Alfred de Rougemont, rich crimson purple, a very attractive colour; Baron Adolphe de Rothschild, brilliant red, approaching to Lord Clyde; Baron de Rothschild, a fine rose; Deuil de Prince Albert, dark crimson, but has the great defect of hanging its head when on the bush; Jean Guojon, light crimson—broad and flat Rose, one or two blooms of it were very bright; Le Rhône, rich colour, fine shape, but, I fear, likely to be delicate; Madame Freeman, pale flesh and white; Mrs. William Paul, red, shaded with dark crimson; President Lincoln, brilliant cherry rose; William Paul, dark crimson; André Leroy, large deep crimson; Laurent Descours, purplish crimson; Vainqueur de Goliath, a fine dark purplish crimson flower; Beauté Française, in Mr. Cant's stand, very like Léon des Combats, but brighter, I think; Paul Desgrand, bright red, shaded; M. Alfred de Rougemont, white, shaded with rose. I have not entered into detailed descriptions of these, for I think we hardly yet know which will stand the best; but I am inclined to think I have selected those which are most likely to be enduring.

The Roses of 1863, sent out here this spring, were not very numerous exhibited. Amongst them I noticed as good:—Alpaide de Rotalier (Campy), clear satiny Rose, but flat in shape; Madame Derrenlx Douvillé, a beautiful Rose, to which I alluded last week—the flowers exhibited were small, but it will be a good and useful Rose—Paul Delameil-lary, a very vigorous large-petalled Rose; Lord Herbert, bright crimson, very much like Beauty of Waltham; Lord Macanlay, a good dark; and Lord Clyde, a very splendid Rose.

Of new Bourbons let out during the same period, there were exhibited Louise Margottin (incorrectly placed in some lists amongst the H.P.'s), a very pretty rose-coloured flower, of good shape; Emotion, somewhat similar in shape but paler in colour; Mademoiselle Emain, another light-coloured and pretty flower; and Reverend H. Dombain, a beautifully-shaped and high-coloured Rose, as exhibited not quite so full as I have seen it, especially on the old plants at Margottin's, where it was very fine.

Of new Teas there were shown Rubens, a fine white, shaded; Triomphe de Guillot fils, white, shaded with rose

and salmon, and in one instance exhibited with a great deal of coppery bronze shading, which gave it a very striking appearance; and Alba, or Alba rosea, a magnificent new Rose, somewhat in the style of Madame Bravy, light, almost white, with rosy centre.

It were an almost endless task to enumerate the various Roses exhibited in the stands of both nurserymen and amateurs. In the former the first prizes were, as it will have been seen, very much distributed, having been respectively assigned to Messrs. Paul & Son, Mr. Cant, Mr. Turner, and Mr. Keynes (two). The second prizes went to Mr. Mitchell (Pitdown), Messrs. Paul & Son, and Mr. Turner (two). Not so amongst amateurs. Here all the first prizes were taken by Mr. Hedge, whose Roses equalled, if not surpassed, his former productions, and whose Teas were a marvel of fine growth and care. And here I may be excused for one word touching a personal matter. My name appears as a prizetaker, and also as a judge. Let me say that in the Class of 18's I requested my able coadjutor to decide without me, which he did; but, feeling that this might not be generally known, I thought it advisable, on my return home, to write to the Secretary of the flower show, saying that I was contented with the position assigned me, and declining to receive the amount awarded, desiring to "avoid even the appearance of evil."

I should think that amateurs must have hailed with pleasure the rule of the Royal Horticultural Society, which excluded the exhibitor in the larger classes from exhibiting in the smaller ones, as, where Mr. Hedge is, there is but little hope of any other competitor taking a first prize. The rule seems to me a good one, as it enables small growers to have some hope of a prize, which is almost out of the question when one has to enter the lists with those whose collection is as large as that of many nurserymen, and grown with perhaps greater care.—D., Deal.

THE ROYAL BOTANIC SOCIETY'S SHOW.

JULY 2ND.

This was the last Show of a brilliant and successful season; and it was not only equal, but in many respects superior to its predecessors. Although the dazzling colours of the Azaleas which lighted up the earlier shows were absent, and although the Pelargoniums, as a whole, were not equal in size or beauty to those previously exhibited, yet, as a compensation, the Stove and Greenhouse Plants were in greater abundance, the Heaths in greater perfection, the cut flowers more numerous and beautiful than ever. Then there was the Fruit—and such fruit! What Black Prince Grapes have ever been seen to equal those from Mr. Hill? At other shows he had exhibited three bunches weighing 8½ lbs. and 10 lbs. 6 ozs., and these were wonderful; but, more wonderful still, he now came with bunches weighing 13 lbs. 10 ozs., and 11 lbs. 10 ozs. for the three, and of which the largest could not be less than 17 inches long, and the smallest 14 or 15, and these perfectly ripe, and symmetrical. That such a display as that of Saturday last, unlike others which have been recently made, should be conducive to the advancement of horticulture cannot be doubted; and that such purely horticultural exhibitions can be made to pay their expenses, and leave a wide margin, not of profit, but of funds to carry out other objects connected with gardening science, the large and fashionable attendance of visitors on that occasion, amounting to many thousands, is abundant proof.

STOVE AND GREENHOUSE PLANTS.—The collections exhibited by Messrs. Whitbread, Gilbert, Fraser, and some others were remarkably fine, and, containing several kinds not before exhibited this season, they excited greater interest. That fine Melastomad Pleroma elegans, as shown by Mr. Whitbread, was covered with numbers of its highly ornamental purple flowers, and it was seen in fine condition in other collections. Ixora salicifolia with magnificent heads of reddish orange bloom came from Mr. May and Mr. Rhodes; and the old but very pretty white-flowered species alba, from the former and Mr. Peed, was also very effective. Allamanda, consisting of Schottii and cathartica, were very fine, particularly the former; Dracophyllum gracile was in good condition in several collections, also Rondeletia speciosa

Polygalas, *Pimeleas*, *Vincas*, *Dipladenias*, *Staticeas*, *Rhynchospermum jasminodes*, growing very gracefully, and covered with its white Jasmine-like flowers; and *Roella ciliata*, very conspicuous from its lavender and violet flowers. *Lesche-naulia formosa*, with numerous scarlet blooms, from Messrs. Lee, forming a bushy little plant, was very pretty. *Erica Parmentieri rosea*, from Mr. Wheeler and Mr. Rhodes, was covered with its splendid deep rose-coloured blooms; Mr. Whitbread sent an immense *Azalea magniflora* in excellent condition, both as regards flowers and foliage; and from Mr. Gilbert came *Kalosanthes superba*, with truly superb scarlet flowers. *Clerodendron Thomsonia*, from Mr. A. Ingram, though not fully out, was also very striking, and when better known this beautiful species will no doubt become a favourite exhibition plant. The prizes awarded were:—For sixteen, Mr. Whitbread first, Mr. Gilbert (gardener to E. L. McMurdo, Esq., Hastings) second, Mr. May, Hawkesyard Park, third; for ten, Mr. Fraser, Lea Bridge, first, Messrs. Lee second, Mr. Williams third, Mr. Rhodes fourth; for ten (Amateurs), Mr. Peed first, Mr. Chilman second; for six, Mr. Wheeler first, Mr. Kaile second, Mr. Page third, Mr. Cross fourth.

Fine-foliaged plants were of the usual character, comprising *Alocasias*, *Crotons*, of which the narrow-leaved sort from Messrs. A. Henderson had the yellow variegation fully developed, and the plant formed a beautiful weeping bush; a very tall *Dracena indivisa* from Mr. Williams; *Latania borbonica*, *Encephalartos latifrons*, the rush-like pendant-leaved *Litsea juncea*, and *Sabal Blackburniana*, a noble plant, from Mr. Taylor. Messrs. Lee were first in the Nurserymen's Class; Messrs. A. Henderson and Williams equal second. In the Amateurs' Class the collections of Messrs. Baines, of Bowden, Cheshire, and of Mr. Fairbairn, of Syon, who were first and second, were very fine; Mr. Taylor and Mr. Young were third and fourth.

FERNS.—Collections of the exotic species comprising large specimens of *Cibotium princeps*, *Cyatheas*, *Gleichenias*, *Dicksonias*, *Todea africana*, &c., were sent by Mr. Williams and Mr. Bull, who received first and second prizes; and those from Mr. Young and Mr. Martin, which were placed equal third, were also good. In British Ferns, Messrs. Ivery's fine collection, as usual, carried off the first prize.

ORCHIDS still made a fine display. Among those from Mr. Baker were the curious greenish-yellow-flowered *Dendrochilum filiforme*, *Ærides odoratum majus*, an old but very free-flowering species, of which this was an excellent specimen, *Cattleya amethystoglossa*, *Saccolabium guttatum*, *Holfordianum* with six fine spikes, *Vandas*, *Lælias*, *Cypripediums*, &c. In the other collections we noticed the green-and-white-flowered *Brassia verrucosa*, the rare *Brassavola Digbyana*, *Cypripedium Hookeri*, and several good varieties of *barbatum*, *Oncidium Lanceanum*, *Cattleya citrina*, with bright yellow flowers, and which does well under cool treatment; *Oncidium flexuosum*, blooming, as it generally does, very freely; also a very fine example of *Cattleya Mossii* from Mr. Penny, besides *Ærides*, *Saccolabium*, *Vandas*, *Cattleyas*, *Lælias*, *Phalenopses*, in fine condition. A dark crimson and yellow *Stanhopea*, from Mr. Rhodes, attracted much attention from its remarkably large and handsome flowers; and by those who did not know that it was a peculiarity of the genus *Acineta Humboldtii*, producing a long spike of flowers from the bottom of the pot, was considered wonderful. This came from Mr. Parker, of Tooting. The prizes awarded were:—For twenty, Mr. Baker, first, Mr. Milford second, Mr. Peed third; for twelve, Mr. Penny first, Mr. Page second, Mr. Chilman third; for six (Nurserymen), Mr. Williams first, Mr. Parker second, Mr. Woolley third, Mr. Rhodes fourth; for six (Amateurs), Mr. Wiggins first, Mr. A. Ingram second, Mr. Wilson third, Mr. Wheeler fourth.

(To be continued.)

CLIANTHUS DAMPIERI SEEDLINGS.

SOME time ago I sought your directions as to the culture of some *Clianthus Dampieri* seedlings, and was requested to let you know whether I succeeded in flowering them; with much pleasure I therefore do so.

I potted my two seedlings in a compost of peat, charcoal, turf soil, and sand, following your instructions as nearly as I could, and giving the plants a good place in the greenhouse.

Both seedlings progressed healthily for some time, but the most vigorous one about two months back suddenly drooped and gradually withered without any apparent cause, the stem of the plant, below the collar, and the roots seemed black and diseased, leading me to suspect that the drainage was faulty, although I had taken great care about it.

I am glad to say, however, that the surviving plant has thriven well, and during the past month has thrown out several splendid blooms in trusses of three or four flowers, with every appearance of continuing to do so for some time to come. The brilliancy of the flowers amply repays the attention required, and I have to thank you for the directions afforded, which have enabled me to flower the plant successfully.—A YOUNG AMATEUR.

P.S.—Is bast matting better for budding purposes than worsted or woollen thread? I budded many stocks with the latter last season with hardly a failure. What is the advantage of bast-matting strips?

[We know of no superiority that the one has over the other.]

FLAVOUR OF FRUIT UNDER GLASS v. THAT ON WALLS.

I AM indebted to "WYRESIDE" for his temperate communication at page 437, in reply to my call for information as to fruit grown under glass being superior in flavour to that grown on walls. He says I have undertaken a very difficult task when I attempt to prove that those who have succeeded in growing as fine fruit under glass as others upon walls, ought not to have done so for physiological reasons. I never undertook to do anything of the kind. What I said and still maintain was, that fruit grown under glass is superior in flavour to that grown on walls in the full sun, was an assertion diametrically opposed to the laws of Nature as expounded to us by vegetable physiologists. "WYRESIDE" says facts are against my argument; and yet he does not furnish us with a single fact wherewith to afford ground for a discussion of the topic, but leaves others to speak of them.

Whether does a Peach tree on a south wall or in an orchard-house enjoy the more light? This is the point on which "WYRESIDE" asserts I am so much in error as to astonish him, yet he adduces no facts; and as for his *a priori* reasons, showing that orchard-house trees enjoy more light than trees on walls, I will show that they even bear out my argument. "WYRESIDE" says, "A wall shuts out half the light of heaven." Admitting this (which I cannot as applied to Peaches on a south wall), it must follow that an orchard-house with an opaque back wall, ends, and sides for some height above the surface is as dark as the wall, from the opaque character of the back wall, darker from the total obstruction of light by the also opaque ends and sides, still darker again from the obstruction of light by the woodwork of the roof, and darker even yet by the impurities ever present even in the best glass, without adding another item to the darkness by the rays reflected, let the angle formed be what it may. If this be true of lean-to houses, how happens it that fruit grown in them is earlier than that in span-roofed houses? What is the cause of their being warmer? "WYRESIDE" does not take cognizance of the fact in the one case, nor of the cause in the other. Is not fruit produced sooner in lean-to houses by that which "WYRESIDE" says makes walls darker than orchard-houses? If a lean-to house be much lighter than a span-roofed, which I contend it is not, how comes a tree on a wall to receive less light than one surrounded by light on every side—such as one under a span-roof with glass ends and sides to the house? A tree surrounded by light on every side, as in a span-roofed house, does not receive nearly so much direct light nor even heat as one in a lean-to; for it is absurd to argue, that because a house presents a larger surface of glass (more than half of it to a diffused light), to the open firmament, that it must necessarily be lighter than another presenting its surface at such an angle that very few rays of light are reflected. I suppose "WYRESIDE" is aware that it is owing to the greater proportion of rays reflected by the roof of a span-roofed house over that reflected by a lean-to, which causes the trees in the former to assimilate the food of the tree in the leaves more slowly than in the latter, through the less intensity of the light; and the heat being less also, less food

is pumped up into the leaves and the process of assimilation goes on more slowly, and the result is, fruit not ripe and the growth not perfected so early as with trees under a lean-to house roof. "WYRESIDE" may explain this away by contending that a span presenting a larger proportion of exposed surface to the air is sufficient to account for the difference of temperature in favour of a lean-to, which owes its heat to the smaller proportion of glass surface presented to the cooling influences of the atmosphere. I admit it; but how comes the lean-to to be heated much more quickly than the span? For the same reason? Decidedly not. Very well, then, we come to the point at once. A span-roofed house affording light to its inmates on every side, they are indebted to refraction for all the light on the west side of the house when the sun's rays fall on the east; and are not Pears on a west wall the same? Cherries on an east wall or aspect are also indebted to the same refraction when the sun's rays are obscured from them by the bricks that intervene between them and the west side on which the sun's rays are falling; but is the light not less intense on the side of the wall opposite that on which the sun shines? I suppose a wall on the sun-side casts no greater shadow than the sun-side of a glass roof, and the trees upon it receive the sun's rays equally from top to bottom. But who can say the same of a glass roof? Why, the trees beneath it are indebted for the light they receive to that which passes through the glass, directly or indirectly, it is all the same; they cannot receive any or but little of that light which the angle of incidence causes to be reflected back into space. If it be as light on the north side of a wall, or in the shadow of anything that obstructs or causes a deviation from the natural course of the rays as in an open space where the sun's rays are not broken by some substance suspended or otherwise causing a deviation from the natural course of the rays, then are trees under glass in the enjoyment of more light than trees on a south wall. There is an equal amount of light on the earth when the sun's rays are obstructed by the clouds, according to "WYRESIDE's" argument as when there are no clouds to intercept them.

"WYRESIDE" again, speaking of light, says that an Apricot on a west wall is deprived of the light which is sufficient to ripen Cherries on the east side by the bricks that intervene. Suppose we take away the wall and the Cherry trees, would the Apricot trees have more light? Not a particle; for immediately we take away the wall leaves appear on that side and shut out the light from the others on the opposite side, rendering them as dark as they were when the wall prevented their receiving any light from that point; and, in addition, they are deprived of the heat absorbed by the bricks and the shelter walls afford.

Then as to trees on walls shooting at an angle from the wall on whatever aspect, does it not arise from the same cause as that which makes orchard-house trees grow upwards towards the glass? Surely trees shoot from walls for the same reason as that which causes orchard-house trees to grow upwards, the lowest branches to be weak and continually dying off—viz., towards the point from which the light is most intense. All trees on walls push their branches towards that which is necessary to their existence—viz., light. In whatever position or situation a plant is placed it is always found pushing its leaves towards the light.

"Does Mr. Abbey imagine that light proceeds only in direct rays from the sun?" asks "WYRESIDE." I can only answer that the theory of light rests on three laws: 1st, The rays of light are straight lines, given and reflected in the same. 2nd, The angles of incidence and refraction are in the same plane, and equal. 3rd, The angles of incidence and refraction are in the same plane, and their sines bear an invariable ratio to one another for the same medium.

As to the Apricot from a wall with a pallid hue on the side next the wall. Is not that pallid hue due to the absence of the same agents that cause those in an orchard-house to be of a "sickly colour" all over—the absence of sun, its light and its heat?

But I must not lose sight of "WYRESIDE" striving to make it appear that I consider it colder under glass than in the open air. If he refers to page 213, he will find that I state that I found the atmosphere 5° warmer in a span-roofed orchard-house than in the open air; but if he expects me to become converted to his views—viz., that heat is not inter-

cepted by glass, or that orchard-houses owe their warmth over that of the open air to any increase of heat caused by the passage of solar heat with its light through glass, I must say he expects me to assert that which I know to be erroneous. The best glass is that which stops the most heat, as Hartley's rough plate, for all horticultural purposes, when the structures are heated or not heated, such structures being warmer than the interior of houses covered with 16-oz. glass. Let "WYRESIDE" keep a register but for a week of the temperatures of three structures equal in their cubic measurements, and also equal in the area which is to admit the sun's rays, and make the latter surface of—1, 16-oz. glass; 2, Hartley's rough plate glass; 3, oiled paper; and he will find more heat or a higher mean temperature under 3 than under 2, and higher under 2 and 3 than beneath 1. Further than this, let him take a large pane of glass, and place it over a thermometer so that the sun's rays will pass vertically through it, and he will find the sun's rays do not raise the mercury more than were there no glass over it; but suppose he place the pane of glass so that the angle of incidence be more than 45°, the mercury sinks proportionately lower than when under the pane of glass with the sun vertically over it.

Again: let him erect a house with an angle of 25°, a second 35°, a third 45°, against a south wall, or with an opaque back wall, and complete his experiment by erecting a span-roofed house with the ends respectively north and south, with the roof at any angle he pleases, and glass down to the ground if he chooses; in short, have glass where we have some opaque material in the first three. All shall be equally well stocked with Peach trees, and all equally well attended to, and which will furnish ripe Peaches the earliest? Why, they will come in order as named, the span-roofed house being fully a month behind the first of the others, and this with double the amount of "glass not intercepting the heat," according to "WYRESIDE," for it is so hot in houses with a glass roof securing light for the trees enclosed on all sides, as to render the heat quite unendurable. Mr. Rivers tells us such a climate is quite delightful. I myself had any time rather spend a week in a span-roofed orchard-house pinching-back the young growths, or otherwise attending to its inmates, than remain an hour in front of a south wall trimming Peach trees trained to it during very hot weather. The air is really so bracing in the former, and so roasting in the other, as to leave no doubt about which is the most comfortable situation to be in. The heat is another question, for heat as determined by the senses is no criterion to go by. In fact, degrees of heat and moisture cannot be determined by the senses with any degree of accuracy.

In conclusion, I can only say that out of the six northern counties of England, and the whole of Scotland, we have but two cases of Peaches and Nectarines being grown in cold or unheated orchard-houses in that extensive range of country, much the largest half of Britain, one cited at Seggieden, near Perth, by "S. R.," and the other by "PENDLE," near the famous peak of that name in Lancashire. Mr. Pearson also states the success of orchard-houses at Prescot, but whether Peaches and Nectarines are successfully grown in houses unheated and detached from a wall is not stated. This is all the evidence we have been favoured with relating to the success of orchard-houses in the north. Surely there have been more successes than those named. I have grown Grapes in unheated lean-to houses within the sound of the striking of big "Peter" of York, and had them ripe by the races held there in the last week of August; Peaches and Nectarines also in unheated lean-to houses in the latter part of July, and beginning of August; and gathered Early Anne Peaches from a south wall in the second week in August; and gone night and morning with a peek basket and collected fallen Peaches from a net in the last week in August and on through September, and more than once have had to go twice, the basket being too small to take all at once. At Bradford, however, such things are not seen, though I have seen Peaches ripen on a wall, yet I looked into all the hoochard-houses round there, from that under 20 feet in length up to those 300 feet long and 20 feet wide, and never yet saw a crop in any of them, nor in those situated in much more favourable localities.

Mr. Rivers, after giving us a racy account of his liking for Cherries, and some excellent information as to their cultiva-

tion under glass (and I can bear witness to how well they do under glass, in unheated orchard-houses in the north), expresses his regret at the "rather low idea of the capabilities of the gardeners in the neighbourhood of Bradford," which, he says, has been given by me, and this in consequence of my having given an account of the failure of Peaches and Nectarines in orchard-houses in that locality. He says that the gardeners there "ought to be able to conquer all the difficulties of the position." They, let me tell him, are qualified to do so; but it will be by heating their orchard-houses, if they mean to have Peaches and Nectarines with certainty, and not in unheated structures. They have grown as good fruit as ever was eaten, but they have received little aid from orchard-houses, except in the matter of Cherries, Plums, Pears, and Apples. Unheated orchard-houses answer well for these, as I stated on former occasions.

Mr. Thomson may deserve great credit for growing Grapes, and having them ripe in January, but I believe he was not the first to accomplish the feat of having ripe new Grapes on the 1st of January; for, some twelve years ago, Mr. Watson, gardener at Ribstone Hall, Knaresborough, Yorkshire, at that time had some nice ripe Grapes, when I called there early in January, growing in a Pine-stove, specimens of which were exhibited at one of the Horticultural Society's meetings in January, and duly reported in the "Transactions" of that Society. At Harewood House, the residence of the Earl of Harewood, I believe Grapes were produced by Mr. Fowler on New-year's Day before Mr. Thomson accomplished the feat at Dalkeith. As for the ripening of Grapes in January teaching us to "look doubtfully on our present laws of vegetable physiology," as far as regards the influence of light ripening fruit, I must refer Mr. Rivers to the exhibiting of old Grapes *versus* new in January, 1863, the former being contributed by Mr. Tillery, Welbeck, and the latter by Mr. Thomson, Dalkeith, with a view of deciding on the relative merits of old over new Grapes. The old, ripening with more "light and sun heat," were unanimously pronounced the best in point of flavour; whilst the new were the freshest, and consequently most attractive in appearance, and as such were preferable to old Grapes. It was said that Mr. Thomson's Grapes were not so "well coloured nor so well flavoured" as they were from the same Vines in the January preceding, which was attributed to the prevalence of cloudy weather whilst the Grapes were ripening. New Grapes, then, ripened in January, were not equal in flavour to those ripened at a period when the sun's light and heat were more powerful.

In reference to my visiting either of the places named by Mr. Rivers, I do not see the necessity for going to either Nottingham or Liverpool to see what I every day see on my present employer's garden walls and espaliers. If Mr. Rivers be at all desirous of testing the capabilities of Yorkshire gardeners, he has nothing to do but send some of his very best orchard-house fruit to any of the York, Leeds, or Bradford Shows, and they will teach him to have anything but a "low idea" of them in future.—GEORGE ABBEY.

[We consider this a very unprofitable discussion. We have eaten Peaches and Nectarines ripened under glass nearly as fine, nearly as luscious, and nearly as high-flavoured as the best ever grown against a wall. Grant that they always are more or less inferior—what then? They are grown under glass for earliness and certainty. As to less light being received by fruit under glass than when grown in the open air—granted; but what then? Fruit trees are grown under glass for the purpose of retaining heat to them. As to Peaches not being ripened in an orchard-house at Bradford, we are quite sure that Mr. Abbey only states what he knows; but the fact only proves that there must be something peculiarly unfavourable in the situation of that town, for it is certain that Peaches are so ripened in many places much further northward.]

SKELETONISING LEAVES AND SEED VESSELS.

Put the specimens in rain water, in which they must remain till decomposition takes place, so that they may be freed from the pulpy matter, and after macerating in clear spring water dry them between sheets of blotting paper,

then bleach them in diluted chloride of lime sufficiently strong to burn the tongue. When whitened, to be washed again in clean water, and dried by sun or fire. Take care not to allow the destructive process to be carried on too long, or it will injure the fibres, nor must they remain too long in the chloride. They may be cleansed, if leaves with strong fibres, with a softish nail brush, or pricked out with a pin, when the pulpy matter adheres too strongly to be removed with water. Some leaves take months to decompose. No two years are alike as to the time of gathering, or time required for the process. If obliged to be taken out of water during the process, for travelling, &c., the leaves must not be allowed to dry, but be kept folded in a damp towel. The softer the water the better. You must not bleach the leaves directly, but wait till you have a quantity to whiten.

LEAVES.—Ivy, Magnolia, Pear, Apple, Butcher's Broom, Andromeda, Tulips, India-rubber, Sycamore, Holly, Aspen, Poplar, Apricot, Lemon, Orange, Box, Lime, Hornbeam, Passion-Flower.

SEED-VESSELS.—Stramonium, Henbane, Poppy, White Cherry, Campanula, Lavatera, Mallow, Hydrangea, Harehound, Sea Holly, Deadly Nightshade, Radish, Flax, Hemp, Stinging Nettle, stalk of Cabbage, tuber of Turnips.

MESSRS. IVERY & SON'S NURSERY, DORKING.

Of the many beautiful spots along the ridge of the North Downs, which stretch nearly across the county of Surrey, there are none from which a finer or more diversified view can be obtained than from Box Hill, in the neighbourhood of Dorking. This, as the name implies, is remarkable for the quantity of common Box (*Buxus sempervirens*), growing there, and believed to be indigenous; and which certainly adds materially to the beauty of the place. At the foot of the hill is a station on the Reading branch of the South-Eastern Railway, known as the Box Hill station, thus affording a facility for such as live at a distance to visit this delightful spot. The convenience of approach is largely availed of by hundreds of persons, and among them, doubtless, by many of your readers who love to enjoy the beauties of nature; so that every fine day in summer numerous groups of cheerful faces may be seen scattered over the green turf, enjoying their picnic and the glorious landscape spread before them.

To enter into detail as to the many salient points of interest that can be viewed from Box Hill is not, however, the object of this article; but to remind the reader, and all interested in horticultural pursuits, that less than ten minutes walk from Box Hill station is one of the most important nurseries in Surrey, and, in some respects, in England—viz., the establishment of Messrs. Ivery & Son: for here originated many of the most splendid of the varieties of *Azalea indica*, that have excited such general admiration at the metropolitan and other flower shows, and which are found in every private collection of merit in Europe; and here also exists the wonderful collection of British Ferns that has now become an adjunct to the great floral displays. When an improved arrangement of those shows shall be effected, nothing will be found more suitable to aid in moderating the overwhelming blaze of the gorgeous specimens produced by the skill of our gardeners than the lovely foliage of the British Ferns.

A visit to this establishment, then, will be found highly interesting, and although mine was made when the *Azaleas* were out of bloom, there was much to be pleased with. A brief inspection of the various houses in which the stock of *Azaleas* are kept was sufficient to be convinced of the excellent state of health and fine condition of the plants ready to be sent out, of which there are several thousands. Among the most important may be mentioned *Iveryana*, *Criterion*, *Admiral*, *Barclayana*, *Gem*, *Beauty of Reigate*, *General Williams*, *Rosea elegans*, *Striata floribunda*, and several other approved kinds, all of which were originated by Messrs. Ivery; and more recently—*Carnation*, *Tricolor*, and *Levinthan*. Of novelties about to be sent out, *Beauty of Dorking* is ready at the present time. It is white striped with rose, of fine form and good substance. *Forget-me-not*, reddish purple, will be ready in May, 1865; and *Pascination*, rose edged with white, in the autumn of next year. Those last-

named will prove great acquisitions. Vast numbers of plants of all the leading kinds raised by other growers are in equally fine condition.

Next, and in no way inferior in merit, is the magnificent collection of hardy Ferns, chiefly British, with about a dozen exotics. Altogether there are in cultivation here 158 varieties of British Ferns, but very many of these originated here as the offspring of other kinds. At present there appears to be no limit to the number of varieties likely to be obtained. Variations occur every year, and some of them of great beauty and distinctness; but it also happens that the seedlings (if I may use this term as applied to Ferns) frequently go back to the form of their original parents. It is worthy of note that all the Ferns actually found wild in this country are kept in stock, so that every lover of this description of plants can readily obtain kinds that would take a long time and distance to find in their wild state. The British Ferns, then, when brought under the training of the skilful cultivator, are yearly showing some new feature of interest, and, because of their hardiness, will at no distant period be eagerly sought for as important items in garden decoration, for dinner tables, plant-cases, and many other purposes where foliage is required as much as colour. Their cultivation is also easy, therefore they may share the attention of all.

The collection of Messrs. Ivery is familiar to the visitors of the great metropolitan shows; but to such as may not have had the opportunity of seeing them the subjoined list may be depended on as containing some of the most beautiful and distinct kinds. *Adiantum capillus-Veneris* (Common Maiden-hair). *Asplenium*.—*Asplenium fontanum* (Smooth Rock Spleenwort); *septentrionale* (Forked Spleenwort); *viridis* (Green Spleenwort). *Athyrium Filix-femina* (Lady-Ferns).—*Athyrium Filix-femina apuriforme*, very beautiful, the outline of the frond resembling a fish, and the pinnae little fishes; *corymbiferum*, fronds and pinnae bearing light tassels at the ends, a vigorous grower, very distinct and lovely; *crispum*, a dwarf tufted variety, very curious; *diffusum*, rather rare; *Fidix*, a new and striking variety, it should be in every collection. The same may be said of *Frizellia*. *Laciniatolineatum* and *plumosum* rank among the most beautiful of the Lady-Ferns. *Blechnum spicant* (Common Hard-Fern).—The best of the tribe is probably *Blechnum spicant ramosum*, all the fronds being beautifully crested at the ends. Nearly as good and distinct are *polydactylon*; *strictum*; *subseriatum*; and *subseriato-imbricatum*. *Lastrea* (*Aspidium*).—*Lastrea Filix-mas* (Male Fern): *Bollandia*, one of the handsomest of the non-cristate varieties of *Filix-mas*, and very distinct; *crispa* is quite a unique kind, differing from the species in the widest manner imaginable; *cristata* is a fine variety; *cristata angustata*, a new and rare form of the preceding; and *Jervisii* is an interesting variety; *Osmunda regalis cristata* is very handsome. *Polypodiums*.—The four following are pretty:—*Polypodium Dryopteris*, *Phegopteris*, *Robertianum*, and *vulgare cambricum* (Welsh Polypody). *Polystichums* (Prickly Shield-Ferns).—*Polystichum angulare imbricatum*; *angulare proliferum*; *angulare Wollastoni*; and *lonchitis* (Holly Fern), are the most desirable. *Scolopendriums* (Hart's Tongue).—Of about thirty of the *Scolopendriums*, the following half a dozen are good:—*Scolopendrium vulgare sculpturatum*; *vulgare Wardii*; *vulgare crispum*; *vulgare digitatum*; *vulgare macrosorum*; and *vulgare muricatum*.

The following four new Ferns are now ready for distribution:—*Athyrium Filix-femina mucronatum* and *glomeratum* (which have both received first-class certificates from the Royal Botanic and Royal Horticultural Societies); *Athyrium Filix-femina Parsonsia*, and *Polystichum aculeatum acrocladon*. The last received a second-class certificate from both Societies, but when shown it was not fully developed, so that its merits have not yet been fully recognised.

Of the nursery stock out of doors, the most prominent are the Conifers, on account of the number, size, and form of the specimens. The Home Nursery, small in extent, contains a large number of fine plants of all the most important kinds used for ornamental purposes. *Wellingtonias* are from 8 to 12 feet high; and among them is one very interesting at the present time from the circumstance of having twelve perfectly-formed cones. The cones were first noticed

last summer, but, not coming to perfection in the autumn, were suffered to remain, and are now firmly set; but it is not certain that they will produce seed. My own supposition is, that they are abnormal, caused by frequent removals of the plants. They are formed round the main stem at the end of the growth of 1862. Also deserving of notice is a *Cupressus Lawsoniana*, with abundance of seed.

The *Araucarias* are very fine. From thirty to forty of them, ranging from 10 to 15 feet high, planted in close proximity, offer a curious and interesting sight, such as can only be seen in the old-established nurseries of England.

It is a mistaken notion that Conifers are only fit for parks and large pleasure grounds. They should be planted everywhere, in the smallest as well as the largest gardens (so many of fastigate habit have, of late years, been introduced that the size can no longer be pleaded as an excuse), much more the compact kinds, as *Thuja* (*Biota*) *aurea*, *Juniperus ericoides*, &c. Any one taking the slightest interest in his garden, and looking at the planted space in front of Mr. Ivery's house, filled with Conifers of all sizes and forms, would not hesitate to acknowledge their beauty, and the wide range of their adaptability.

Among the other plants most worthy of note is a large one of *Lonicera aureo-reticulata*, which stood out in a rather exposed situation the whole winter. It continued growing the whole time, excepting in the severe frosts, when very small portions of the ends of the shoots suffered trifling injury. The hardy character of this beautiful climber is thus sufficiently proved.

At the upper end of the nursery on the north side of the boundary-wall is a collection of *Ivies* and *Vincas*, suitable for shady and other places, where many things will not grow. Of the former Mr. Ivery tells me he has thirty-nine varieties. Many of them are very distinctly striped and blotched.

The Roses are here, as they must be in every nursery, an important branch of the business. A judicious selection of the really best kinds is infinitely better than an indiscriminate propagation of the good and bad that have always been muddled together in extensive collections. Without getting behind the times, the Messrs. Ivery are careful to keep out, as far as possible, the rubbish sent to England every year by the French growers. At the time of my visit there were good blooms of *Triomphe d'Angers*, *Triomphe de Caen* (good colour, but rather too thin), *Deuil de Prince Albert*, *L'Elegante*, *John Hopper*, *Charles Lefebvre* (good), *Senateur Vaisse* (still A1), *Cecile de Chabillant* (ditto), *Duchess of Norfolk*, *Mademoiselle Bonnaire* (one of the best light Roses), *William Griffiths*, *America*, *Général Jacqueminot*, *Baronne Prevost*, &c.

In conclusion, I have to acknowledge the courtesy and kind attention of Mr. Ivery in pointing out the various objects of interest.—ADOLPHUS H. KENT, *Blechningley*.

DESTROYING THE RED SPIDER.

THE mixture used for the destruction of the red spider (and noticed by you at page 461) is not made from gum, but sago flour—a much cheaper mixture than gum, as it costs in Liverpool only about 10s. per cwt. (Potato starch will do equally well, if sago flour is not obtainable). My starch was made in the following manner:—2 lbs. of sago flour were made into a thin paste, thickening it in the same way as the laundry-maids do when making starch. This paste was then poured into three gallons of boiling water, and the mixture well stirred up until it came to boiling again, it was then mixed with six gallons of cold water, and applied to the trees immediately by a syringe having a jointed nozzle. Thirty trees in my orchard-house were syringed with the effect shown on the leaf sent to the office of THE JOURNAL OF HORTICULTURE.

It cannot be used too soon after being made. The cold water with which it is mixed reduces the temperature to something like 100° F., which is quite safe, but if allowed to get cold it has not the same fluidity as at first.

I think it best suited for Peaches and Nectarines. The pubescence on the under side of the leaf in the Apple and the Plum, hold the film of paste more tenaciously than does the leaf of the Peach. For the thrips it ought to be very fluid to get close alongside the midrib of the leaf, and at the

same time be so strong as to impound them. This requires greater strength than is needed for the red spider.

I think the trees require syringing two or three times, as

a single leaf missed is sufficient to stock the tree with those pests again.—T. G.

P.S.—It is not effectual for the aphids.

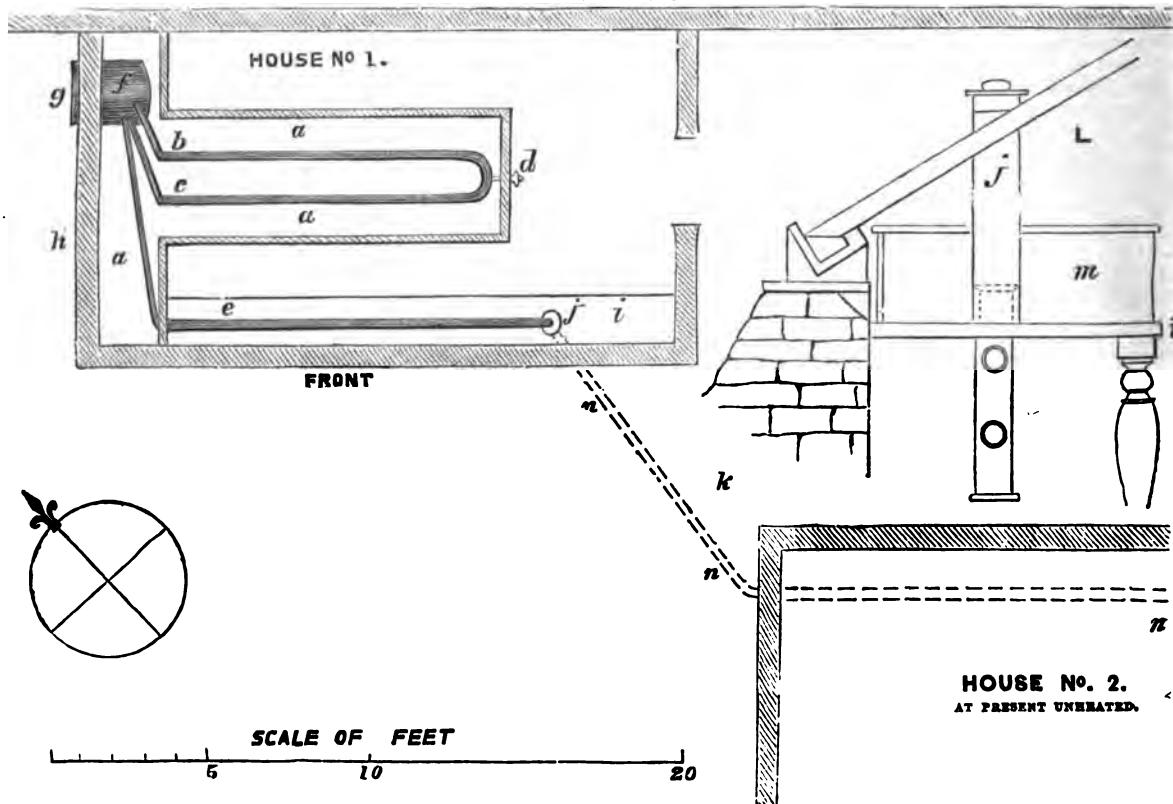
MORE FIRE THAN NEEDFUL TO HEAT THE WATER CIRCULATED.

LAST autumn I put up a small house (No. 1) chiefly for propagating purposes, a semi-span, on Hereman's Paxtonian principle, 20 feet by 10 feet. It was heated as shown in the plan. I soon found that I had not enough water for my heat, for no sooner does the fire burn up than it boils. At first I had a half-inch gas-pipe led through the glass roof at *j*, for the escape of the steam; but this was quite insufficient. Then I had a tube of zinc made 6 inches in diameter, secured over the pipe junction, and carried through the roof, and then covered with a perforated lid—the whole shown at *j*, in the section L. But this scarcely mends the matter, for the space enclosed in this six-inch pipe is insufficient to hold the swollen water at boiling point; and so, ever and anon,

it rushes and roars up, throws off the lid, and pours in streams upon the glass roof, penetrating down to the plants beneath, scalding them, and filling the house with steam. This is difficulty the first.

Now, as a remedy, it has been suggested that I have a parallel-sided cistern made of zinc or sheet iron, to hold about twenty-four gallons, and put this instead of the present steam-pipe, soldering it over the open junction, as shown by the section (*m*), dotted in section L. This would have a moveable lid, for supply, and it is thought that the increased contents would both leave ample room for swelling under heat, and also by the increased body of water obviate the tendency to too ready boiling.

BACK WALL.



- a*, Walled pit, filled with tan, for plunging.
- b, c*, Flow and return four-inch pipe for bottom heat.
- d*, Tap at end of ditto.
- e*, Flow and return four-inch pipe for atmospheric heat.
- f*, Boiler.
- g*, Fireplace.
- h*, Stokehole, under a shed.

- i*, Front shelf.
- j*, Steam-escape pipe.
- k*, Garden walk.
- l*, Section of front shelf at *j*, on larger scale.
- m*, Proposed waste-cistern.
- n*, Proposed continuation of pipes to House 2.

Please to give me your opinion on this, and if you approve, say whether the proposed cistern should be of zinc or sheet iron.

Now then for difficulty the second. I want to put a little heat into house No. 2, and think that my boiler (*f*) is adequate to the work. The distance from house to house is about 9 feet, and it is proposed to carry one-inch connection-pipes from the flow and return at *j*, to similar flow and return four-inch pipes to be placed in house No. 2. The proposed connections and pipes are indicated by the lines (*n*). But the space between the houses is occupied by the garden walk (*k*), which cannot be removed. May the connection-pipes dip beneath the gravel, and rise again to

their proper level within the house, No. 2? since their level, even when so buried, would not descend nearly so low as the point at which each pipe respectively issues from or rejoins the boiler. Please to tell whether such a dip is practicable.

I have omitted to say that as the heating of house No. 2 will only be occasional, while the heating of No. 1 is constant, the pipes (*n*) must each have a valve or stop; but this will present no difficulty, I presume.—ORCHIDOPHILUS.

[The primary cause of your trouble is having too much fire for the body of water to be heated, which causes the water to boil, and very likely to form steam next the boiler, the force of which throws the water up the six-inch

waste-pipe which you take right up through the roof of the house. We have had similar trouble in small houses and pits, from the expansion of the water when heated to or near the boiling point. If you have no more heat than you want, with the pipes thus hot, you had better add more piping, and not have them so hot, as the heat given off from the pipes at from 200° to 212° is very trying for tender plants. It would be safer not to have the water above 170°, or lower than that. Then the water would expand less. If, with water at 170°, or lower, you will have enough of heat, then the next point will be to moderate the strength of your fire, either by using inferior fuel or banking-up with ashes, and keeping the ashpit-door close whenever you have obtained as much heat as you want. By this means a gentle uniform heat may be kept up under any boiler, as the draught, if not regulated by the ashpit-door, can also be regulated by a damper. If from neglect or other causes there would be a doubt of this answering, the great means of safety would be your proposed expansion-cistern. It matters not how this is fixed, whether by the side or on the top of the open end of the pipe, provided the cistern communicates with the pipe and stands mostly above it. When the fire is lighted the water in the cistern should not stand much above the orifice of the open pipe. This will afford all that more room for expansion of the water; and if the cistern is covered, to prevent the escape of vapour as the water cools, there will be plenty of water to fill the pipes and boiler, with, now and then, a little addition being made to it.

Now, but for your safety-pipe through the roof, there would be danger of an explosion. With that safety-pipe, and the large discharge you speak of, there is danger of air getting into the pipes, especially the lower ones for bottom heat; and then, not to speak of danger, it ought to be generally known that a body of air enclosed between two columns of water gets, for all circulation purposes, as impassable as a barrier of solid rock. We perceive you have a tap or turncock at the farther end of the pipes for bottom heat, and, we presume, at the highest point of the pipes. The turning of this will let off any accumulated air; but why not have an open gas-pipe going outside the house instead, which would be continuously self-acting, and save you all the trouble of turning the tap? If a little hot water was your object, you could obtain that from your cistern; but for all delicate purposes it is best to use pure soft water, warmed in the house by being set over the cistern.

As to the material for the cistern, either zinc or sheet iron will answer well enough, but they will soon oxidise. If either is dipped twice in a galvanising trough they will last much longer. We would as soon have a wood box, say of 1½-inch boards, well beaten and joined at the corners. This kept constantly supplied with water will last a long time. Even if lined with zinc or thin lead both will last much longer from the support of the wood. As already stated, the large cistern will be the best safety valve.

Secondly. As the junction-pipes to the second house, even when under the gravel path, will not be so low as the pipes in the first house when they issue from the boiler, the simplest mode of heating the second house, which only needs heat occasionally, would be to take a flow-pipe from the proposed cistern, which you could plug up, when not wanted, with a wooden plug. But the return-pipe must not return to the cistern, but form one of the other returns, or communicate at once from house No. 2 to the bottom of the boiler. We state this because it is best that the return-pipe from No. 2 should not rise, but rather decline from thence to the boiler. You might have taken only one flow-pipe from the boiler to the cistern, and from thence taken pipes for bottom heat, or top heat, wherever you liked, provided the pipes in no place were lower than the boiler, and the return-pipes, if anything, fell to the bottom of the boiler. The one-inch connecting-pipe you propose must be bedded in sawdust, or some non-conducting material, or it will lose much heat in the course of 9 feet. We would prefer at least a two-inch pipe.]

PLANTS FOR SMOKY LOCALITIES.

THE reply which you have given to "L. H. S." shows you to be well acquainted with all the trees and shrubs which can grow in the vicinity of smoky large towns.

I live a mile distant from the centre of Manchester, on the east side. My garden is protected either with trees or buildings, except from the north. Limes and Elms appear to grow well for two or three years, and then either break off midway down the trunks, or, as if by magic, die in a moment. Poplars are thin, ragged, and unsightly, and are certain to die off. The Copper-leaved Beech holds its place, certainly, but with great struggling. The Mountain Ash does tolerably. The Horse Chestnut grows freely, but never blooms. The north and north-west winds affect the young leaves severely, making a wreck where abundant foliage existed. Pear trees grow well, but bloom only occasionally. This year three Pear trees, each of them at least 45 feet in height, have been profusely covered with leaves; one only bloomed, the other two disdained the trouble. Thorns grow well, and flower freely, both white and red. Lilacs, Gualdree Rose, Siberian Crab, and the Elder do well, more especially the latter, which seems as if it took a pride in combating the enemy, smoke, and routing it altogether.

Azaleas grow well, the yellow one more freely than any other sort. The Azalea thrives best when it is protected from the keen blast or the blazing midday sun. But of all the evergreens which thrive here let me sing the praises of the Rhododendron. Some of the less hardy varieties have great difficulty in maintaining their footing, and indeed, like consumptive people, die off. Our garden would be nothing without the Rhododendrons, they are charming and beautiful whether in flower or not; waving their heads with every breeze of wind, they become the most polite and courteous of evergreens. Aucubas do very well indeed, they grow up into strong bushy trees, suffering from nothing but unkind Jack Frost. White and yellow Brooms, as you say, do fairly, but that is all that can be said of them. Young Hollies appear to be doing well, but their seniors keep on disappearing. Laurustinus will not do; whilst the *Ledum latifolium* make their balls of snow every season. The Ribes thrives very well. Weigela rosea will not bloom, coax it ever so much. Privet is successful, and makes wood freely. Laburnums are very satisfactory for a town buried in smoke, but when compared with those grown in more favoured situations they are scarcely worth naming.

I have thus gone through almost all the kinds I am able to grow, which agrees with nearly all you have written. There is, however, one remark I am desirous of making to all who desire to have trees and shrubs in the neighbourhood of large towns, and it is this—that if they want to be successful they must look carefully after them, and never cease their efforts in protecting them from the enemies which they have to fight against.—H. A.

NEW STRAWBERRIES.

THE ROYAL HAUTOBOIS.—Through the kindness of the Rev. W. F. Radclyffe, of Rushton, we have received a basket of the fruit of Rivers' Royal Hautbois, which, notwithstanding the distance travelled, came in excellent condition. This is by far the best variety of the Hautbois we have ever seen. It is the largest in size and the most abundant bearer, and the flavour is superior to any other of the Hautbois. The colour, like that of all the other varieties, is partly purplish rose and partly pale yellowish; and the flavour, as a friend remarked, was "like Strawberries and cream."

MR. DE JONGHE, of Brussels, has sent us specimens of two new Strawberries which we think will prove useful additions to those already in cultivation, if it were for no other property than that of bearing a long journey without injury. In both of these the flesh is so firm and solid that the condition in which we received them was most excellent, and the flavour was not in the least destroyed.

BIRou.—This is evidently of the same race as that other excellent variety raised by Mr. De Jonghe called *La Constante*. The stalks of the leaves and fruit are short and stout, clothed with spreading hairs. The blade of the leaves is of a glaucous green beneath, and a clear shining dark green above. Flowers small.

Fruit not so large as that of *La Constante*, from which it was raised, ovate or conical, regularly formed, and having large seeds, which are level with or rather prominent on the

surface. The skin is of a clear, varnished cherry-red, well coloured all over the surface. Flesh firm and solid, white throughout, juicy, rich, and with a sprightly flavour.

This seems a very hardy variety, judging from the leaves and fruit that were received.

SOUVENIR.—This is apparently of more luxuriant growth than Bijou and La Constante, but it has all the appearance of belonging to the same hardy race. It is an immense bearer, and produces masses of noble fruit. The stalks of the leaves and fruit are clothed with spreading hairs; the leaves are broad, roundish, and deeply dentate, of a dark and somewhat shining green above.

The fruit is large, sometimes very large, varying from rounded ovate to long conical, and in some instances it is irregular and corrugated in shape. Seeds large and even with the surface. Skin of a uniform shining cherry-red colour. Flesh white, firm, and solid, juicy, richly flavoured, and with a fine pine-apple aroma.

This is a very excellent Strawberry, and, in our opinion, surpasses all the other varieties raised by Mr. de Jonghe.

DESTROYING THE GOOSEBERRY CATERPILLAR.

IN No. 168 I see your correspondent complains of the leaves of the Gooseberry tree being injured by the wash, the recipe of which I sent you. This I suspect was owing to the soap not being sufficiently dissolved. In that case, wherever the clots of soap touch the leaf, they leave a brown speck similar to the mark of the Celery grub, but if care is taken in this respect, I still adhere to my original statement, that it is the best cure for the caterpillar pest. Only yesterday I discovered some young trees affected. I instantly watered them over with the solution from a fine-rosed water-pot, and in less than half an hour the caterpillars were dead by hundreds on the ground.—EVAN YORK NEWMAN, *Bucknall Rectory*.

THE question of the Gooseberry caterpillar having so frequently come before our notice, and being still under discussion, I beg permission, among the rest, to offer a few remarks on the subject; and, at the same time, to give a brief description of its habits, and the various changes it undergoes during its season, which, I think, will tend to show how easily parties may be mistaken when guided only by fancy and hearsay.

About thirty or thirty-five years ago my trees were so infested with these destructive larvæ that I was induced to watch very carefully the different movements and changes, both of these and other insects destructive to vegetation. But to proceed with the caterpillar.

This pest is the progeny of a very small fly, a species of *Tenthredo*. The fly of the first brood emerges about the end of March or beginning of April from its chrysalis state, in which it has continued all winter, a few inches deep in the earth, under the bush. Each insect deposits its eggs, and to end, sometimes to the number of thirty or forty, along the ribs and under the expanding foliage. Here they remain in the embryo state a few days, till nature pushes them forward into living depredators; and in a few days more marks of their existence will be visible upon the foliage—viz., small round holes, like pin-holes, to the amount of the number of caterpillars. After the insects produced upon the several leaves have devoured those leaves, they then spread over all the other unoccupied parts of the trees, consuming them leaf by leaf, until they are full-grown; and then nature bids them retire from the bush, preparatory to the appearance of a second brood, which will be about the end of May or the beginning of June, when the caterpillars may be seen casting their maculated skins amongst the remaining leaves of the trees and the weeds under them, when they enter the earth a few inches as before, and there remain about six weeks, and again leave the cocoon or case to establish the latter brood, which feed as usual until the caterpillars are full-grown, at which time they retire into the earth for their winter quarters.

After having fully satisfied myself about their habits, &c., my next step was to provide a remedy for these ravenous depredators. I first tried salt and water, and in about half an

hour the trees were in a dying state. My next application was alum and water, 1 lb. to eight gallons of water. This had the effect of dispersing them, only to wander over the branches and upon the earth. Some, however, died, while others in a day or two resumed their work. I then tried common brown or mottled soap, thinly sliced, and dissolved in gently-boiling water; to this I added six gallons of rain water and two gallons of tobacco water. This mixture was applied with the engine in fine spray over the bushes, and followed by a man with a fine whisk, dashing the wet gently in amongst the foliage. This treatment proved effectual, and destructive to the caterpillars. But alas! like many other things now-a-days, both soap and tobacco water are no longer genuine: indeed the tobacco water of the present day is useless. For the next remedy: when the caterpillars became more advanced in growth, or nearly matured, a piece of canvass was provided, say 5 feet square, a slit was cut halfway through it, and it was drawn by two men round the tree, the stem of which was then struck smartly once or twice with a stick provided on purpose, with a cross-piece, 6 inches long, nailed on the end of it, covered with cloth to avoid bruising the trees. When the stem was struck down came all the pests upon the canvass, which was emptied from time to time, and the caterpillars destroyed. This was an important operation, for it removed all apprehension of another brood. But prevention is better than cure, and I am of opinion that picking off the leaves the moment they exhibit the small round holes mentioned above, is decidedly the best plan of all, and they must be looked for about the two periods I have named above.

It may appear a tedious process; but when we consider the great mischief that is prevented by destroying these young depredators before they quit the leaf they are produced upon, and spread over the whole tree, I think the trouble will hardly be worthy a consideration. I may just add that neither placing Elder, Broom, Furze, nor, indeed, any other plants, in the bush will have the desired effect; and all applications about the roots are useless, as the shell protecting the chrysalis is so hard and well manufactured that no application can penetrate it. I can only help your clerical correspondent over his mistake in imagining the branch of Furze placed in the Gooseberry bush to have destroyed the caterpillar by supposing that it was most probably leaving the trees at this time, preparatory to its first change.

In conclusion, I may just observe that I have not a single Gooseberry caterpillar, I think, in my garden, and have not had for years, owing, I really believe, to the encouragement I give to birds. Blackbirds and Thrushes, with other birds, are singing delightfully all day long; and large armies of that much-despised bird, the Sparrow, spread themselves over the ground, daily gathering caterpillars, aphids, &c., not only from the Gooseberry bushes, but from most other kinds of fruit trees, shrubs, &c.—JOSHUA MAJOR, *Landscape Gardener, Knosthorpe, near Leeds*.

WORK FOR THE WEEK.

KITCHEN GARDEN.

THE frequent showers we have had of late have been very favourable for all necessary operations. Every yard of ground that can be spared should be prepared and planted with winter vegetables. Stir the surface of the soil amongst all growing crops where practicable; it will enable the rain to penetrate through it with greater facility as well as check evaporation. The early crops of *Peas*, *Spinach*, *Radishes*, and *Cauliflowers* should be cleared off the ground as soon as they are exhausted. The ground, well manured and dug, might be planted with *Cauliflowers* or *Walcheren Broccoli*. Continue to ridge out *Celery*, and plant the *Broccoli* and winter *Greens* on all disposable vacancies. Sow *Spinach*, *Turnips*, *Endive*, *Lettuces*, and *Radishes* to maintain the successional supply. Plant *Leeks* in well-manured land.

FLOWER GARDEN.

As we may presume the principal planting-out for the season is over, and for which the late rains will be of much service in promoting a free start, the usual routine of pegging down plants intended to be kept dwarf, tying others up, and keeping the surface of the beds free from weeds until they are covered by the growing plants, will comprise

most of what is required for the next few weeks. In the meantime some attention must be paid to propagating various kinds of perennial plants of which a stock is required. Cuttings may be put in of Tea and China Roses, selecting wood of the present year when it becomes a little firm at the base. Roots, bulbs, &c., of Anemones, Tulips, Crocuses, Scillas, Fritillarias, &c., which have been out of the ground for some time to dry, should be properly labelled, and put by till the autumn, when they will be required to fill up their respective beds for spring flowering. Keep the smaller and seedling plants free from weeds, and lose no time in sowing perennial and biennial flower seeds for blooming next season. Quick and Privet hedges should be closely cut-in with the shears. Let them slope-in a little towards the top, which will give them a better appearance; but hedges of larger-leaved plants as Laurel, Turkey and Locombe Oak, and Sweet Bay, must have the young wood cut back with the knife, as the shears would destroy the beauty of their leaves. Shrubs grown to embellish Italian and geometric gardens, terraces, &c., should now likewise be cut into the figures they are to assume; in many cases wires will be necessary to keep the branches in the proper places at first, when afterwards the knife and shears will suffice to keep them in proper form. Portugal Laurel, Cypress, Arbor Vitæ, Yews, Bays, and tree Box, are the plants most commonly employed for this purpose, and when cut into architectural figures are fine accompaniments of the above style of gardening. They should, however, be clipped in two or three times during the season, to preserve correctly the required outline. Flowering shrubs as they go out of bloom to have the dead flowers, &c., removed, and be slightly cut back. For the same reason remove the seed-pods from Rhododendrons, tree Pæonies, &c. These little attentions will be followed by an increased growth of the plant, and with the greater certainty of their blooming every season. Late-sown annuals should be thinned out as soon as they are well above ground, for if left to grow too thickly they spoil one another, and never make half the display plants do that are allowed plenty of space, and which are grown strongly from the first. Plants growing in baskets and vases to have a final stirring of the surface of the soil before it is entirely covered with foliage. Likewise put on a layer of moss to check evaporation, and thus save some labour in watering. On light dry soils American plants will be greatly benefited by a good soaking of water after flowering, and the finer specimens should be mulched to assist in keeping the roots moist during the growing season. Water Dahlias in dry weather; it will also be serviceable to mulch the surface of the soil with rotten manure. Trap earwigs.

FRUIT GARDEN.

Peach trees will require repeated attention directed to the judicious regulation of the wood, with the view of maintaining the equilibrium of the tree. An undue growth of laterals should be suppressed, and the shoots regularly tacked to the wall, and the fruit exposed to the light. Trained Pears demand similar attention. Remove Raspberry suckers, four will be sufficient to remain. Strawberry runners will be found sufficiently advanced for layering.

GREENHOUSE AND CONSERVATORY.

Should the plant-structures require repairs or cleaning, the stock may be removed with greater safety at this than at any other period. It is injudicious to leave the completion of such work until late in the season. Enjoin care in watering. Some importance belongs to the due adjustment of the supply to meet the varying requirements of the plants. Attend to the propagation of Pelargoniums and herbaceous Calceolarias, and other half-hardy plants. Forward Chinese Primroses for winter blooming, and watch the general stock for autumn decoration. See that the Lilacs, Deutzias, and Provence Roses forced the preceding season are plunged and top-dressed. Propagate the Chinese Chrysanthemums for blooming in small pots. Go over the twiners in the conservatory frequently, and regulate the growth before the shoots get entangled; but avoid keeping them tied too closely, for they are never seen to advantage unless they are allowed to hang in their own natural and graceful manner. A number of hardwooded plants which were cut back some weeks since, will now have recovered themselves, and be commencing a fresh growth. This is

the proper time to shift into larger pots any plants requiring it. After potting keep the plants close for a few days, and syringe them daily, but avoid giving any more water to the roots than is sufficient to preserve the old ball moist. Mind the roots of the plant are well moistened before being potted. At this season when the plants in the conservatory are making their growth preparatory to blooming, it is of the greatest consequence that the border in which they are planted should be properly examined as to its humidity throughout, and receive, if necessary, a thorough soaking of weak liquid manure. This application should not be delayed too long; if applied late it might prolong the growth so much in the autumn as to prevent its getting ripened in due time, and hence the blooming of the plants would be injured. These remarks apply, of course, to those plants permanently planted out, such as Camellias, Oranges, climbers, &c.

STOVE.

The stock here will now be growing very rapidly, and must be afforded sufficient space to allow of the perfect development of the foliage, and the formation of compact, handsome specimens. The atmosphere of this house can hardly be kept too moist, and the plants should be sprinkled overhead morning and evening, and every available surface kept constantly moist. A slight shade will be necessary for tender plants in active growth, for a few hours on the forenoons of bright days; but this should be used as sparingly as is consistent with the perfect safety of the foliage. Plants that are known to suffer from the direct action of the sun's rays should be placed in a shady part of the house, or kept together at one end, where they can be shaded without interfering with the plants that require plenty of light. Mealy bug and thrips will require to be looked after here for some time to come, and the utmost diligence must be used to keep these pests in check.

W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

Sowed two rows of Peas. Planted out more Celery. Pricked out more winter stuff. We envy those who can plant out quarters at once, for we have to do the next best thing and must lift if possible with little balls as we get some ground cleared. The rains and the sewage together have made early Peas continue so long in full bearing, that we shall not be able to remove them for some time. Plants of Sangster's, turned out from being sown on turves, and which have been daily gathered from since the first days of June, are now nearly 6 feet high, and so loaded that people will not believe they have been gathered from at all. With plenty of nourishment and close picking much may be done in little room. Went over a piece of Dwarf Kidney Beans under protection, and picked off all the larger beans for the hall, as one pod with beans forming and swelling inside will more exhaust the plant than a dozen nice crisp ones in which no sign of the bean appears.

Staked Peas and Scarlet Runners, using for the latter the rough tops of some young larch trees, which we have kept several years for this purpose. This and spruce after the foliage has fallen are excellent for this purpose, and owing to the resin and turpentine which they contain, will last long after common pea-sticks from hazel, beech, hornbeam, &c., have rotted into dust. Twigs from these resinous trees answer well for the plants in the flower garden, and we prefer the spruce for bushiness and their lasting properties. Fresh twigs of larch—that is, those taken last winter, make also capital hair-pin pegs for the flower-garden. They are nipped off in bundles 6 or 7 inches long, are just cracked in the middle, and the two ends stuck in the ground over the shoot to be pegged down. Thinned Turnips, sowed succession of them and Radishes. Planted Cauliflower, watered that producing with manure water. Gave larger pots to Capsicums from which we expect ripe fruit for Cayenne pepper. Prepared Mushroom-bed in shed. Thinned out Tomatoes. Thinned and top-dressed Cucumbers in frames, which up to this time have done splendidly and as yet gave no signs of the *Cucumber disease*, which troubled us last season and for which we could find no remedy except fresh soil and frequent planting.

This disease for two years, showing itself in little brown spots on the leaf, and a guttering gumming of the fruit, showed itself on every member of the Cucumber family except Melons, which never were more healthy. In-doors and out of doors, by hot-water heat, and dung heat, and no heat at all, under hand-lights, and in the open air, Cucumbers and Vegetable Marrows suffered and in almost every variety of soil, and we failed to have good Cucumbers except by frequent planting. We were not at all troubled last year in the early part of the season. As yet we have seen no appearance of the evil, and we hope we shall escape the infliction. It was annoying to be scarce of Cucumbers when they could be bought for "two a-penny."

We have nearly a dozen of inquiries on this subject, and we say honestly to them all, that after trying all sorts of schemes we could not destroy the evil, and the safest plan is just to sow again whenever a trace of the disease appears. Grow the plants to a good size in pots, and destroy the old ones. Clean the place well and plant in fresh soil. What brings it we are quite unable to say, as in almost every conceivable position, Cucumbers were affected here after mid-summer last year, when they had borne only a short time and produced at first healthy fruit. Generally a bed of Cucumbers used to last the season, but they have not done so lately with us; but we hope that our beds will continue to produce as abundantly as they have done this season. If so, we shall be glad; but if we should be so fortunate, we freely confess that we shall be as unable to account for the continued success, as for the previous presence of disease, as the course of treatment is much the same as that followed for many years, when Cucumbers were such a matter of course as to give no trouble whatever except the routine of management.

FRUIT GARDEN.

Much the same as previous week. Plenty now to pick and choose from. Gave a little more water to British Queen Strawberries, where the crop was heavy. Hope to have drier weather for the other kinds to get them gathered. Raised Melons on flats to keep them from the soil, and thus prevent cracking. Gave a drier air to those ripening, so as to secure flavour by that and full sunshine. The shading of Melons is one cause of their inferior flavour. In managing Melons disbudding is better than pruning. The mode of disbudding and stopping which we consider most systematic and correct has been given several times already. Here we think it necessary to state a little fact in the way of caution. We have used bruised laurel leaves for *destroying green fly* and other insects. We tried it a short time ago on Cucumbers and Melons, where a little green fly showed itself. The leaves or young shoots of the laurel are very strong in prussic acid when bruised now, and, therefore, much fewer of them must be used than in winter and spring. In a two-light box of Cucumbers half a peck of these leaves, bruised, were placed in an open box, and they settled the insects without hurting the plants. When about the same quantity was placed in a bed of Melons the larger leaves were considerably injured, and had to be removed; and this also injured the fruit then set a little more. As we had others about the same stage we removed the fruit as well as the affected leaves, and allowed the young shoots to run again, which are now setting with young fruit. We have often found that Melon leaves are more sensitive to tobacco smoke than Cucumber leaves. The same seems to hold good with the fumes from laurel leaves. Such facts tell us to beware of strong doses of anything. We believe that the Melon leaves were dry.

We do not think we can give the *rationale* of the result, but we have seen the half of a house syringed before smoking with tobacco, and the other half left dry. Though both ends of the house were filled with similar plants, the syringed plants suffered considerably, whilst the dry plants were not the least injured. In places that can be at all shaded it is a good plan to give little air for twenty-four or thirty-six hours after smoking, and though the paths and the stages of the house are kept moist, no syringing until after that time should be given to the plants. Insects that are only sickly at first will die in such an atmosphere. If washed off and not killed by the fall they are refreshed by the water and the pure air near the floor, and will be able to crawl up again in

shoals. These may be some of the reasons why insects are found worse to destroy at some times than at others.

We are now getting Cherries out of doors in plenty, before we have finished with Cherries in pots in the orchard-house. The latter seem to be the best flavoured. A Cherry-house must be a fine sight. For early ones we would be disposed to have a house in two divisions; to set the fruit in the colder almost open house, and then take them to swell off where more heat could be given—even if that was by an earlier shutting-up. We had Cherries by this means very early. A few Plums in pots will also come early so treated. When we fairly try Apricots in pots, we would treat early ones much the same. Neither they nor Cherries will stand a confined warm atmosphere in their earlier stages. With all this, however, and seeing anything but the impossible in the culture of fruit in pots, we by no means say a word as respects the economy of the thing. The watering alone will make a hole in the question of economies. For amateurs who do a good deal of the work themselves, and who have a pleasure in having a great deal in little room, we have no fears of the system going out of fashion.

In general, and in dry weather especially, kept the floor and stages pretty moist, except in the places where Grapes are ripe and ripening. This we consider a better plan in general than washing the Vines all over, until and even after the bunches are colouring. Unless the purest water can be obtained the Grapes are apt to be disfigured. We never can depend much on our water as to clearness and purity, and therefore we prefer that what the Vines do receive shall be pure, such as is raised by evaporation; and we like to see the dew drops hanging from the points of the leaves in a morning which they have condensed during the night. We generally give the Vines a good shake, as soon as the fruit is set, to get rid of the bloom; and then, generally, we syringe every part well with tepid water, the clearest we can get, to remove all remains of the bloom, and after that we syringe no more. With a little sulphur on the pipes, and the moisture on the paths, and a rather close atmosphere instead of a very airy one, we are seldom troubled with red spider; and we see little of thrips on the Vines since we gave up placing Azaleas under the Vines. If there was a single thrips on the Azaleas he would be sure to found a colony on the Vines.

It is a grand thing when plants are kept in their separate houses, instead of being forced to make every house an *omnium gatherum*, or a general receptacle. We never have a house for Vines alone, until the Vines are getting ripe. At all other times whenever a ray of light can be obtained, there are plants below for profit or pleasure.

A few of the brown beetle appeared in the Peach-house, from which we have been gathering some time, and these we were forced to squeeze and wash off. *Smoking* was out of the question, as it would have left its nauseous flavour with the fruit. This house was not smoked during the season. If a few green fly appeared they were rubbed off or washed, as the house until lately has been supplied with Strawberries on shelves, and after the fruit commences the second swelling a smoking with tobacco injures the flavour, unless, perhaps, for veteran chewers of the weed. Some time ago, we had nice-looking Keens' Seedling Strawberry sent to taste, and one tasting was enough. We could not make it out at all, until some close questioning brought out the fact, that a few days before the place had been smoked three nights running. The Strawberries might nearly as well have lain an hour in tobacco juice. We do not know any fruit that is not less or more affected by tobacco smoke, when the fruit is ripening. We recollect tasting a fine Melon with a peculiar custard flavour, which seemed to give a sort of piquancy to the natural aroma of the Melon, though a little more would have made the Melon disagreeable. We found out that just as the fruit was cracking its skin a little as it was ripening, some bruised Laurel leaves had been put in the frame to keep some green fly at bay. All fruit as it ripens should be kept in the purest air, and that air if possible drier than usual. Every thing uncleanly ought to be avoided. Some objections have been made to what we said the other week about washing Strawberries. All we shall say is, that if those who will take the trouble to grow Strawberries, will not take the trouble to keep them clean, they pretty well deserve to be choked with dirt. Even the grit would be preferable to fruit washed in a

pail not over-clean with hands not over-delicate, and then spread out to dry before going to table. What sort of flavour can they have after such sousing and washing, and the necessary accompaniments? for we maintain that where nothing is done to keep Strawberries clean, there will be no great particularity in the mode of cleaning them. One great advantage of growing small fruit, as Gooseberries, Currants, &c., on trellises, and elevated as dwarf standards is, that the fruit will always be clean. No spattering of mud on them after a shower. These things will be more thought of when quality as respects flavour shall be more considered than mere appearance, when fruit is sent to table to be eaten, instead of, as is now often the case, merely to be looked at. After using different coloured gravels and other materials as a substitute for flowers in beds, it would only be a step to paint wood and wax, in imitation of the best fruit for the ornamenting of the table. If for mere show they could be rendered as attractive as the realities.

We are informed that artificial bouquets are now taken to balls and routs, and that a favourite scent can at any time be thrown over them by touching a spring in a concealed bottle or reservoir. The huge size that bouquets are now getting—enough for a moderate-sized flower-bed—may force on the use of artificial flowers among those who feel compelled to follow the fashionable, and yet keenly study economics. After all, what great difference can there be in a lady holding a nosegay of artificial flowers in her hand, and carrying a sheaf of imitation of the real and unreal in her bonnet? For our sister flowers of humanity there is no flower we gardeners can cultivate that can be too good; but there is such a thing as gracefulness and beauty being so over-adorned that what is considered by many indispensable to be fashionable, is looked upon by those of more chaste and refined taste as nothing but deformity and vulgarity. With such variety of tastes it is a matter of gratitude that all may carry out their own peculiar views if they do not infringe on the rights of their neighbours.

ORNAMENTAL DEPARTMENT.

Here we have been very busy in potting, clearing, mowing, rolling, &c.; but on these, and especially potting and the summer treatment of plants, we shall have something to say next week.—R. F.

COVENT GARDEN MARKET.—JULY 2.

Of all out-door vegetables there is now an abundant supply; and of Pines, Grapes, Melons, Strawberries, the supply is fully equal to the demand. Peaches principally consist of Violette Hâtive, Noblesse, and Royal George, the latter and Galand or Bellegarde being particularly fine. Some excellent Figs are brought from Marseilles; and consignments from abroad continue to arrive, and consist of Victoria and Green Gage Plums, Carrots, Kidney Beans, Endive, Artichokes and Tomatoes. Common Cherries can now be obtained at from 3d. to 6d. per lb., but for those of the best quality former prices are still maintained. Cut flowers principally consist of Roses, Peonies, Orchids, Stephanotis, Calceolarias, Sweet Peas, and Mignonette.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples ½ sieve	0	0	0	0	Melons each	4	0	10	0
Apricots doz.	1	0	3	0	Nectarines 100	10	0	20	0
Cherries lb.	1	0	2	0	Oranges 100	10	0	16	0
Figs doz.	8	0	12	0	Peaches doz.	18	0	36	0
Victoria & Nuts 100 lbs.	0	0	0	0	Pears bush.	0	0	0	0
Grapes, Green ½ sieve	2	0	4	0	Pine Apples doz.	0	0	0	0
Grapes, Hothouse lb.	6	0	10	0	Strawberries punnet	6	0	10	0
Muscats 100	8	0	14	0	Walnuts bush.	14	0	20	0
Lemons 100	4	0	10	0					

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Asparagus bundle	3	0	6	0	Mushrooms bottle	1	0	2	0
Beans Broad ½ sieve	1	6	0	0	Must. & Cress, punnet	0	2	0	4
Kidney 100	1	0	1	6	Onions bunch	0	4	0	6
Beet, Red 100	1	0	3	0	Pickling quart	0	6	0	8
Broad bundle	0	0	0	0	Parsley ½ sieve	1	0	2	0
Cabbages doz.	0	9	1	6	Parsnips doz.	0	9	1	6
Carrots bunch	0	5	0	8	Peas quart	0	6	1	6
Cauliflower doz.	2	0	4	0	Potatoes bushel	2	0	5	0
Celery bundle	1	6	2	0	Potatoes sack	8	0	12	0
Cumbers each	0	6	1	0	New lb.	0	2	0	4
Endive score	1	3	2	6	Radishes doz. bunches	0	6	0	8
Fennel bunch	0	3	0	0	Turnip 0	0	6	1	6
Gage and shallots, lb.	0	8	0	0	Rhubarb 0	0	4	0	6
Kohlrabi bunch	0	3	0	0	Sea-Kale basket	0	0	0	0
Kewerash bundle	1	6	4	0	Spinach sieve	1	0	2	0
Leeks bunch	0	4	0	6	Turnips bunch	6	4	0	6
Letts score	0	9	1	3					

TO CORRESPONDENTS.

RUELLIA, LEBENHAULTIA, AND ERICA CULTURE (T. G.).—A cool greenhouse is the proper place for them, and the highest and most airy situation the structure affords. Sandy peat is the most suitable compost, good drainage being the key of good root-action. The soil should at all times be kept moist; too much moisture, however, is certain destruction to the roots, and a dry soil both to them and the plant. At all times, except in very frosty weather, they require fresh air continuously winter and summer, and should not be mixed with other plants which would rob them of light and air. They like a rather dry atmosphere, a close moist atmosphere being very injurious.

FOXGLOVE—GYPSUM (A. N. W.).—If cattle were to eat a large quantity of Foxglove it would be fatal to them, probably; but we believe they would not eat it unless starving. The residue after obtaining carbonic acid by pouring sulphuric acid upon whitening is gypsum, or Plaster of Paris (sulphate of lime), and has been applied beneficially to Clover, and as a top-dressing to lawns. On some soils it has been found beneficial when mixed with them previously to sowing Turnips and planting Potatoes. 3 cwt. of it per acre is sufficient.

SEEDLING CINERARIA CULTURE (A Young Gardener).—Pot them singly, when large enough to handle, in 48-sized pots, and place in a cold frame. Heat is ruinous to Cinerarias. When the pots are full of roots shift into 24's, and grow on in the frame as before, putting on the lights only during very wet weather, and in the early frosty nights of autumn. Remove the plants to the greenhouse in the beginning of October, and shift into 16's or 12's according as you wish to have the plants large or small. Keep near the glass in the coldest place, it cannot be too cool so long as frost is excluded, and give abundance of air at all times, except in frosty weather. Keep down the green fly by frequently fumigating with tobacco smoke. A compost of turfy loam one-half, and one-half leaf mould, and well-rotted manure in equal parts, is the most suitable compost.

VINES IN POTS (T. H. J.).—Keep the Vines in pots dry at the roots, but do not withhold water altogether, give only sufficient to maintain the leaves from flagging. If your Vines are trained so as to be near the glass, we advise you to let them remain there until the leaves have fallen; but if not in a situation where they receive abundance of light by close proximity to the glass, we advise you to have them placed there at once, and so get the wood hardened, or ripened, before you think of putting them outside. So long as the large leaves remain green the eye at their axil is not fully developed, nor can the wood be ripe, though it may be brown. Maintain a dry atmosphere by a gentle fire in cold moist weather, in the house from which the Grapes have been cut; give air day and night; remove most of the laterals, to admit air and light to the large leaves and wood, and in about a fortnight cease firing altogether, and give all the air possible. The leaves will fall in due time. Bowood Muscat does well in the same house as Black Hamburgh, but it should have the warmest situation.

HOYA CULTURE (M. H.).—As your plant grows well it cannot be for want of heat that it does not bloom. Is it shaded by climbers, and at a great distance from the light? If so, and we fear it is, place in a position where it will receive the full sun; and, to assist in ripening the wood, give little water at the root—in fact, let it become dry after August, and give no more moisture during winter than is sufficient to prevent the leaves drying or shrivelling up. We have one now, on the back wall of a vinery, with more than five hundred bunches of bloom upon it, and upwards of fifty of its wax-like flowers in some of the bunches.

WELLINGTONIA GIGANTEA (Rusticus).—Instead of your Wellingtonia thriving we think it is growing very slowly. The plant may have been grown in a pot prior to its being planted out, which has been the ruin of many of our choicest Conifers. Pot culture gives the roots a corkscrew character, whereas they naturally ramify through the soil in all directions from the stem, and this prevents their taking hold freely of the soil after planting, and their growth is slow on account of the crooked channels by which the sap is transmitted to the part above ground. The roots, too, in consequence of their corkscrew character, are not enabled to take that firm hold of the soil which enables the trees to withstand the violence of winds, and they are sometimes blown over. The above may be one cause of yours not doing well, or it may be attributable to improper planting, as in a cold, wet, clayey soil, and on the level without any preparation. Our advice is: selecting a showery time in September, remove the turf for a space of 6 feet all round the tree. Have a cartload of moderately rich loam—if turfy loam with an equal quantity of leaf mould intermixed, or much the better—in readiness, then take up the tree carefully with a ball if practicable, and dig the whole of surface from which the turf is removed one spit deep. Spread about half the cartload of fresh compost on the newly dug ground, and point it in with a fork. This done place the tree in the centre with the bottom of the ball upon the surface, and put fresh compost round the ball, so as to cover it an inch or two higher up than before, pressing the soil gently around the ball. Place the soil over the dug portion of the field, so as to slope from the tree down to the turf all round. Your tree will then stand on a gentle mound, flattened or dished at the top for about a yard wide, to hold water, of which give a good supply immediately after planting, and then relay the turf, which will not be sufficient to cover the little hillock, but will leave a space about 1 foot 6 inches wide all round the tree. The edges of the turf will form a dish very use ul in supplying the tree with water about twice a-week in dry weather, if any be needed afterwards, which will be the case if September be dry; but none will be needed after planting if the weather be at all wet and showery. Try this, and your tree will astonish you.

ADONIS UMBELLATUS CULTURE (Idem).—Pot in a compost of turfy loam and leaf mould in April, and place in a light airy situation in a cool greenhouse. Water moderately after potting, but when the pots become dried with roots water abundantly from May until October, keeping rather dry at the roots at other times, but not so as to affect the foliage much. The plants may be placed out of doors in June, and returned to their winter quarters in October. Under this treatment they mostly flower in September, and when distributed in large clumps in vases, or tubs, on terraces, they have a fine appearance. Kept in the greenhouse continuously they usually bloom in May, sometimes in autumn, and occasionally at both periods.

CUT FLOWERS (R. S.).—A prize "for the best collection" is very indefinite. We suppose the judges will be influenced not only by the number of different kinds, but by the taste with which they are arranged; and here we cannot help you, unless we had the flowers before us.

VARIOUS (W. M.).—1. With the greater heat in sunshine in a curate's vinery, there would be the greater cold in dull weather, because the accumulated heat would sooner radiate. The larger orchard-house would have the advantage of greater uniformity of temperature, being not so quickly heated nor so quickly cooled, and the comparative earliness of the two would depend more on circumstances and the management, than on the merits of the respective systems. 2. Common meshes, wide or narrow, may easily be made to fit to the ridge form, by placing them together at top, and a yard or more apart at the base in the shape of a triangle. 3. Your proposed plan of using your sashes over a sloping frame with the vines underneath is an old and a good plan. We have seen hundreds of good bunches thus obtained. Vines were grown against a wall, the frames were moved along the walls, so that a fresh piece of the vines was taken in every year. A rough hotbed of litter was made, the frame set over it, and the vine stems introduced, either through holes in the back of the frame, or just amongst the dung beneath it. The steam did good at first. By the time the manure had become sweet the buds would be swelling, and the material somewhat consolidated. Then the surface was covered with slates, most likely painted with sulphur, and the vine stems trained, say 10 inches above the slate. Air was only attended to; and a warm dull day selected for thinning the grapes. The same plan answers admirably, as in the curate's vinery, without any fermenting material, but they will not come to maturity so early. The mere distance of the vines from the slates, provided the sun strikes on the latter, is of less importance as respects earliness than careful attention to the early giving and the early taking away of air, so as to enclose the concentrated power of the sunbeams. 4. By increasing the height of your frame-house, so as to be able to walk underneath it and do the work standing, and having no slates, you would be no better off than in your orchard-house. But, without the slates, you may ripen good grapes in such a place; and you would succeed all the better and earlier, if you had a floor or wall that, from its dark colour, would absorb heat in the early part of the season; and of a light colour, so as to reflect heat and light in the autumn. We only speak of the latter colour in such a raised house. In a frame we should dread burning from the white colour. 5. Orchard-houses are very much as they are managed. Good gardeners are loath to say "we cannot;" but no work has ever contained so many confessions of failures and disappointments, from head men in the profession, as this work does. We believe all our conditors act on the principle that a failure understood is as instructive as a success. It is folly to condemn wholesale what many succeed so well in; and our columns are as open to failures as to successes. Our own opinion is, that almost anything may be grown in a pot or tub; but that it can be so grown economically for general purposes is entirely another affair. The watering alone would make havoc in the profits, but that allowed, there can be little question as to obtaining crops. Of course, let them hang as they grow, and failure is certain. Most people are rather sanguine, buy a lot of cheap trees with unripened wood and obtain no fruit that will stand. Good folks should at least try trees next season that they have themselves looked over this season. 6. If you could tell the reason why your Peach and Apricot trees in pots, so full of bloom, dropped their fruit, that would be a gain to yourself, and to the profession generally. The mere fact of failure is less against a system than a fact of success is in its favour. It is just possible that, like spoiled children, your plants had too much attention. We should conclude the growth was rather vigorous. We hope to have a better account of these trees next year. No doubt you will succeed with Vines, either in boxes or planted out. We also believe you will succeed with Peach trees, if your enthusiasm points that way, even though you should somewhat diminish the attention for securing luxuriance, and give a little more to the hardening of the wood early in autumn.

FIGUS ELASTICA (A Reader).—We do not notice anything the matter with the leaf enclosed, and think the leaves fall naturally. With the *Bilbergia vittata* the cause may also be the same—namely, the old parts decaying as new ones take the strength and vigour of the plant. Your plants, however, we fear, are too copiously syringed, and the sun's rays striking powerfully upon them cause the spotted appearance which the India-rubber leaf had.

ROSES ON THEIR OWN ROOTS (S.).—We are at a loss to account for your Madame Lafay not blooming. It is one of the freest-blooming amongst the Hybrid Perpetuals. 1. We have not found any of Hybrid Perpetuals shy bloomers on their own roots; generally the reverse. 2. Caroline de Sansal, Comte de Nanteuil, Baronne Prevost, Général Jacqueminot, Jules Margottin, Madame Vidot, William Jesse, Prince Léon, Sénateur Vaisee, Princesse Mathilde, Maréchal Vaillant, and Lord Raglan.

VINES IN POTS—ROSES (W. Treasure).—The best kinds of Grape Vines for you will be the Royal Muscadine and Black Hamburgh—soil rich loam; pots not less than 16 inches across. The best plan would be to get fruiting-plants at once. The difficulty will be that, if you take a heavy crop from these pots, so as to be attractive in your windows, the plants will not do much good afterwards, and you must have a fresh supply. You can easily grow fresh plants, but the difficulty will be in getting the wood well ripened in the autumn, if you have not a wall to give them a good heat against it. Is there no means of planting Vines outside, so that you could take so many shoots inside the window every year, and save the trouble with the pots? The pots will keep best in winter in the cellar; the pots even then surrounded with litter a little moist, or moss, or anything of the kind. If your Roses make such good wood, merely nip the points off in the autumn, and bend the shoots a little in spring, and you will have plenty of Roses. Keep the same principle in view with your strong-growing young Roses. Keep them dryish in autumn, to ripen the wood well.

CAULIFLOWER PLANTS BLIND (T. W. U. R.).—We attribute this to some defect in the formation of the seed. That it is a defect of the seed we have no doubt; for such plants never exhibit any traces of a plumule or growing point beyond the seed-leaves and a few rough leaves, and the plants always show, even from the seed-leaf, the want of a centre, or that which is necessary to produce a head. We at one time were inclined to attribute it to the attack of some insect, which ate out the centre of the plant whilst young; but by minute inspection we could find no trace of such an occurrence, still much to confirm us in the opinion that the defect was due to the defective organisation of the seed in the pod. We never experienced any difference between sowing the seed in poor and in rich soil; and thick and thin sowings were alike affected as regards the number of blind plants. Seeds, too, from the same packet, sown in different places, were all alike barren, whilst those from another packet, under the same conditions, gave perfect plants.—G. A.

MILDEWED STRAWBERRY PLANTS (H. M. P.).—The Black Prince Strawberry plants, if the leaf sent is a good specimen, are eaten up with mildew, the result, we should say, of being grown thickly in the bed, and standing too long in the same ground. They may also have suffered by want of water. The partial shade, and extra manuring may be the cause in the younger (the two-year-old) rows. Have you examined the state of the roots? After the fine showers we were surprised to find heavy crops of British Queen not swelling so fast as expected, and we found the roots too dry for the crop. We would advise change of soil, fresh plants from another garden, and not excessive manuring. We cannot be certain as to the Strawberry you describe, but we have very little doubt that it was the Hautbois.

MIMULUS CUPREUS FLOWERS EATEN (S. E. H.).—Slugs will eat the flowers; but if you have made sure that there are none in your garden, it must be the earwigs. They will eat the flowers of nearly anything, and in all probability they are the cause. We never suffered from sparrows; but if they be the cause of the mischief, some strips of glass, suspended on black thread or worsted, and about a foot above the plants, will make the sparrows cautious about visiting the spot. Earwigs may be caught by setting a number of earwig traps, which are to be had of most seedsmen for a trifle; or bean-stalks, cut into five or six-inch lengths, and placed horizontally on the bed, will catch a goodly number. They should be daily examined, and the earwigs blown out and destroyed.

SEEDLING GERANIUM (M. A.).—It is pretty, but its value must be decided by the habit of the plant. If very dwarf it would be worth while to send a plant of it in a pot, when in bloom, to the Floral Committee of the Royal Horticultural Society. The petals of the French Pelargonium were all shed; and from a flower only it is not often that the name can be determined, the varieties are such legions.

PLUM LEAVES DISEASED (—).—They are infested with a parasitic fungus. It evidently commences growth within the tissue of the leaves. Its production of spores might be checked, perhaps, by dusting the leaves with flowers of sulphur. We would also, in the autumn, have the walls painted with some mixture of which sulphur formed an ingredient. Salt, sprinkled over the border in the spring, might also be beneficial.

CALCEOLARIAS DYING (A Constant Reader).—If your plants turned out in pots had been those only that died, we could most likely have hit upon the reason. If the pots were at all full of roots, and were turned out dry, and with the ball unraffled, no amount of future watering would damp the bulk of the roots, and, when exposed to a bright sun, there would first be flagging and then death. Those lifted from beds are not so subject to these evils, but even these should be well watered before they are lifted. We have lost some plants in a row that we found, on examination, were lifted with balls, but in a dry state. The moisture given in such case went beyond the balls, but not through them. These are the only primary causes of failure we can think of at present. Where the ground is light and sandy, it should be well firmed against Calceolarias, and the surface merely left open. There is just one thing more as respects the layered Calceolarias—Was the layering done before the severe frosts in May? In "Doings of the Last Week," last year, it was shown that layered shoots would be injured, and upright ones would escape. Why should Calceolarias be layered? It is against their nature. If layered down at all, it is better to plant on the slope, instead of bending the stems afterwards. It is better, however, to let the plants grow upright in their natural position. Verbenas, and things of that kind, that root along their stems, are better pegged-down; but, in strong rich ground, they also bloom better if pegged or twiggied up, instead of being pegged-down. It would be as well to nip-in the laterals of the Clematis. The best remedy for the fungus in the Melon-beds is to give several good waterings with lime water. That will destroy the spawn if anything will. If you had examined the soil before using it, you would most likely have detected the white threads of the spawn, which should have been picked out. We can believe that your Melons will be thrown up, for we once saw a stone pavement thrown about as if crowbars had been used, and the joints had been cemented too.

MILDEW ON ROSES (A Constant Reader).—We never before saw any Rose trees so severely mildewed as are yours. We can only add to our recommendation published last week, that we would dust all the leaves and branches thoroughly with flowers of sulphur. If the Roses are overshadowed by other trees, these ought to be thinned, so as to admit more light to the Roses.

PASTWICK FLOWER SHOW (B.).—We are very glad it was so successful, but to report it is not permissible. There are hundreds like it—all admirable, all doing a large measure of good; and the doings of which we are requested to record. If we admitted one we could not exclude the others; and our columns would be too much occupied with details uninteresting to the generality of our readers.

CLAY FOR STRAWBERRY-BEDS ON LIGHT SOIL (Daniel Cartwright).—Add the lime to the clay before it is applied to the plot intended for Strawberries. Having the clay in readiness, and the lime fresh from the kiln, or unslacked, place a thin layer of lime, and put one of clay, double the thickness of the lime, upon it; then another layer of lime, more clay upon it, and so on, until the whole is formed into a heap 4 feet high, the outside of the heap being of clay. One ton of lime is sufficient for six of clay. The lime will heat the whole of the mass, and make the mineral ingredients of the clay more soluble. After the lime and clay has lain a week in the heap, it may be spread upon the plot of ground, and dug in. Another plan is to place the lime in heaps of about a bushel, and to cover these with the lumps of clay. In either case the lime must be sprinkled with water before covering with clay, if the last be dry; but, if it be wet, water is not necessary to cause the lime to fall. The compost thus formed should be applied to the ground before deluging rains fall upon the heap, and make so much mortar of it. Six inches of the compost, spread equally over the surface, and dug in, will be a good dressing.

HEDGE (A Subscriber).—We do not see in what way we have misunderstood you. Copper Beech is not so hardy as the common Beech, and does not form so good a hedge. If you want a hedge of low growth, nothing grows so fast as Privet; but if you want something to attain a height of 10 feet or more, we know of nothing better than common Beech; and this we would plant along with the Copper Beech, or Purple, unless you prefer a hedge but 6 feet high, then Privet would make a hedge sooner.

NAMES OF INSECTS (S. T.).—The cells found in the old post, surrounded with pieces of Rose leaves, are the cells of the Leaf-cutter Bee, *Macropis centaurialis*. There is a description and drawing of the insect in the first volume of our New Series.

VINE LEAVES (M. T.).—The roughness beneath the leaves never occurs but on very vigorous vines. It will not deteriorate the crop. Admit air very freely.

DESTROYING GREEN FLY ON PLANTS IN BLOOM (Amateur).—Fumigate the plants with tobacco smoke.

PEACH TREES INFESTED WITH SCALE (A Constant Reader).—You can do little towards destroying the pests that infest your trees now beyond dubbing the infected parts with gum water, made by dissolving 4 ozs. of gum arabic in a quart of cold soft water, applying it with a soft brush. In about a week after it is applied it should be washed off by syringing strongly with water at a temperature of 120°. After the leaves fall wash the trees with a solution of Gishurst compound at the strength of 8 ozs. to the gallon of soft water. Apply it with a brush, rubbing it well into the cracks and crevices of the old wood, being careful not to injure the young fruit-buds with the brush. They must, however, be coated with the solution.

CULTURE OF FOREST TREES (Austrian).—"The Forester," written by Mr. Brown, of Arncliffe, and published by Messrs. Blackwood, will give you every information.

NAMES OF PLANTS (W. L.).—1, *Styrax officinale*, Linn.; 2, *Chionanthus virginica*, Linn., with terminal inflorescence; 3, *Sassafras officinale*, Nees; 4, apparently *Pinus uncinata*, but we cannot decide without seeing the cones; 5, *Chionanthus virginica*, Linn., with axillary inflorescence; 6, *Rhododendron hirsutum*, Linn. (*J. C. Sheffield*).—1, *Symphoricarpos racemosus*, Michx. It is not a "British plant," as supposed, but a native of North America, and has escaped from gardens in this country. 2, *Sagina procumbens*, L.; 3, *Carex remota*, L.; 4, *Veronica serpyllifolia*, L.; 5, *Arenaria tenuifolia*, L. (*F. S. B.*).—The two Ferns are: 1, *Pteris serrulata*, L., var.; 2, *Adiantum hispidulum*, Sw.; and the flowering plants: 1, *Glaux maritima*, L.; 2, *Cynoglossum officinale*, L. The Moss we cannot name without a proper specimen in fruit. (*S. N. E.*).—1, *Adiantum capillus-Veneris*, L., var.; 2, *Asplenium fragrans*, Sw.; 3, *Onychium japonicum*, Vise; 4, *Erica Irbyana*, Andr.; 5, *E. tricolor*, Don; 6, *E. ventricosa*, Thunb. (*A Constant Subscriber*).—1, *Adiantum pedatum*, L.; 2, *Polystichum aculeatum*, L.; 3, *Lomaria spicata*, Desv.; 4, Not in a fit state to be named; 5, an *Anemone*, but the specimen is not sufficient to show which species. (*E. W.*).—1, *Hemerocallis flava*, L.; 2, *Spiraea filipendula*, L.; 3, cannot be named from such a scrap; 4, *Epilobium angustifolium*, L. (*A. L.*).—The plant with red flowers is *Callistemon lanceolatum*, D. C.; and the other *Pittosporum undulatum*. (*J. Nicholls*).—The flowering plant is *Spiraea salicifolia*, L.; and the Fern, *Scolopendrium vulgare*, Sw. (*B., Womstead*).—The Vine leaves have a fungus upon them, but it is more connected with excessive luxuriance than any other cause. We cannot name the seed-pod with certainty. It appears to belong to a *Bignonia*, or something closely allied.

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

JOTTINGS AT AN AGRICULTURAL SHOW.

THE county Agricultural Meeting was held this year at **Mannerling Maudit**, and being of the number of those who have nothing to do, I determined to go, and ordered my bed at the Angel. I arrived in the evening, and found the gateway full of hearty-looking men. As I belong to the northern division of the county, and the Show was held in the south, and most of those present were judges and local committeemen, and as I had only lately taken to agriculture (I now farm twenty acres, and have two cows, two horses, several pigs, and lots of poultry), I was unknown. I verily believe I work harder upon and think more of my farm of twenty acres than I did at my business when at the head of a firm in the city. My object, therefore, was to get into the thick of the learned in agriculture, and to store all I heard in my mind. My anxiety on this point may give you the origin of these notes. As the evening grew later, the Angel filled. Most of the visitors had friends in the town, and they dropped in one by one till the room was full.

My first note was that the conversation was confined to the subject for which all had met. There were plenty of exciting political topics, but they were not mentioned. One young man, who seemed to be "getting on," introduced hunting, but the subject dropped. Another said something about the Malt-tax; even that found no second; but the merits of sheep and oxen, of a certain horse bred in that county, of a breed of pigs recently introduced, of the weight of roots, and the probable average of the wheat crop, were endless subjects. Later the Judges came in. They knew most of the company, and everybody knew them. They knew their work would be early, and they soon retired—I did the same; but my bed was over the sitting-room, and it was getting towards daybreak when the cessation of the noise below allowed me to go to sleep. It was evident the real agricultural element had long retired to rest, save a few young ones, and these joined to many of the loose fish of the town, treated the inmates of the house to hunting and Bacchanalian songs, varied with negro melodies, the instrumental part of the concert consisting of rapping to time with the knuckles on the table, and striking tumblers with spoons,

every man to his taste. On a fine morning in June, between two and three, there yet remained some finding pleasure in declaring they would not go till morning and daylight, both of which had arrived.

At this Show they follow the very objectionable plan of public judging, and this led me to notice the difference in the manners, habits, and characters of these gentlemen.

Being on the spot, and a member of the Society, I was enabled to get early admittance, before there were many people on the ground, and to notice all that interested me. The Judges were in sets of three for each department. First, the Demonstrative. This Judge rather prefers to have the public around him, or at least within sight. He attitudes; he likes to prove the task is not an easy one; he likes three or four competitors brought out from their pens and put side by side. He is then in his glory. He walks round them; he handles them, he appeals to his colleagues. With his right leg thrown well out, his head and bust thrown back, he stretches out his hands and arms, the former palms uppermost, and then comes the music; he hears from the spectators, "Look at him!" "What pains he takes!" "First-rate Judge!" And if his colleagues are against him he leaves them "not in anger," and walks towards the admiring spectators. It needs all the stern discipline of a poultry show to check the tendency to applaud. We have seen such a one have out a sheep between two rows of pens, and, after trying to impress its merits on his colleagues, at last kneel down to demonstrate the points he was describing.

The next is the Passive. He wishes to have no one present but the Judges; he speaks but seldom, when he does it is to the purpose. He rarely handles anything; he speaks almost in a whisper; he is a first-rate judge, and his colleagues know it. The spectators say, "they don't think much of him."

The third is the "Have-his-own-way" man. He walks along the pens or stalls, and, having made his survey, at once points to a pen of fowls, or to any animal or animals, and says, "This is my first." It is useless to try and convince him he is wrong; he knows better; and he'll stand there all day, or sleep there all night, but "that's his first." As for the others it's all a parcel of stuff. No doubt the other Judges honestly mean well, but they are wrong; there isn't a beast in the class fit to hold a candle to his. At last the two unite in deciding against him. Well, he's beat, and he can't help it, but he will say, and he don't care who hears it, there never was a worse decision; he'd sooner have his choice than any other three beasts in the class.

These were the Judges, and I found them the same when I dined with them afterwards. There was no assumption of character, no acting. The first and third really believed it was one of the highest offices a man could fill. I did not envy them; but, as I was walking about unconcerned and they were still handling, I think they envied me.

Next I had to look at the public—I like to do so. The first who came in was one of the leading men of the place, but rather notorious for his love of money. He seems to wear the same clothes, in every particular, that he wore and that were worn fifty years ago—blue coat with metal buttons, buff waistcoat, and drab trousers. As he passed through the wicket, he displayed his card. "Wish for a catalogue, sir?" said a young man. "Of course I do—member and subscriber." He took it. "Sixpence, sir." "Nonsense, my good fellow—member and subscriber, I tell you." "I have to pay for all, sir, and you must pay." "Where is the Secretary?" asked the now irate man. "Sixpence for a trumpery catalogue! it is unbearable—hand always in one's pocket—I won't pay for it. Ah! there goes Jubbins, the Secretary. Here Jub, my dear fellow, tell this tiresome man I am a member and subscriber. He wants me to give sixpence for a trumpery catalogue." "So you must." "What! pay for a catalogue! Never! Here take it back, you man. Sixpence indeed, to me, a member and subscriber!" While I was walking about the Show, he borrowed mine three times, having mislaid his own.

Then I noticed a man to be met with everywhere. He pays his price for admission, he buys a catalogue, he takes every paper of every kind that is offered to him. He thanks the man who is working the machine, and who shows him the process of making a drain-tile. He had a try at a hydro-pult, but he was unfortunate, and discharged it full in the

face of the "rural" who was looking on. I was wondering whether he ever bought anything, when the question was solved for me by two men who were in attendance on their master at an implement stand. "The gov'nor did not make a customer of him, Jim." "No, I should think not; them civil fellows that say Thank ye, and admire everything, never buy."

Next, there was another class equally ubiquitous, young, well dressed, tolerably well informed, and rather fast; eccentric in his choice of neck-tie, and his jewellery. He was standing near the first-prize pen of very fat Pigs; some young ladies were opposite, and a very stout man was looking complacently at the swine. "The owner, I presume," said the young man. "Yes," said the farmer. "Things do well in your part." "Yes, not much the matter." He glanced across at the young ladies, and went on.

There was the important gent smoking a cigar placed in a case that was composed of two kittens playing with a small ball, which had a hollow in it to receive the end of the cigar. He had a neck-tie remarkable from appearing to have every shade and colour that could be got together, and fastened with a most elaborate ring. His conversation was that this Show was very well for a small thing, but they should see the Show at "Porsey," in France. He always went.

Then the ladies' man, wearing a straw hat surrounded by a dainty ribband, his open throat spanned by a diminutive collar, held in its place by a narrow blue tie, which was passed through a ring. "Ever and anon" he removed his hat to pass his fingers through his rather long and curling hair, and to show how accurately it was parted down the middle. He was surrounded by ladies who seemed much pleased with his answers to their many questions about stock. He wished he might never be smiled upon again if he knew anything about the animals; but he thought those things in the square dwellings formed of hurdles were *bas lambs*, and that great thing with horns was a *moo cow*, and so on.

We got tired of him and dropped on a man who was sure of nothing; the only answer to be had from him was, it might or it might not be. We asked him a question, which he answered in the affirmative, and then sent a friend on purpose, to whom he said, No, because the question leaned to that answer. He was delighted with the whole Show, which he declared to be marvellous.

Then the Lord-Burleigh man, who joins every party that is looking at anything in particular, and when appealed to or spoken to, either nods his head, or sapiently rolls it from side to side, and then passes on.

These all give way to the man who either follows his calling by being at the Show, or gleams the knowledge necessary to enable him to indulge a hobby, with the satisfaction of knowing he was doing good while he was indulging his fancy. I have always thought shows were most excellent things, and I have met with more common-sense men and conversation in a showyard, than I often have at an exhibition during the London season. Lately, I have seen your columns open to contributions that only bear on the pursuit: therefore, if you think fit, you can find a corner for one who sometimes thinks with—PEN AND INK.

JUDGES AT THE INTENDED POULTRY SHOW AT THE AGRICULTURAL HALL.

OBSERVING it stated in your last, that Mr. Hewitt is to be one of the Judges at the forthcoming Poultry Show at the Agricultural Hall, I beg to state that no such appointment has yet taken place, consequently your article and remarks are premature.—EDWD. TUDMAN, an Hon. Sec. to Poultry Club.

[We saw a letter from Mr. Tudman to Mr. Hewitt, dated June 20th, asking him to be "a Judge for the Club," and ending with this—"I know full well your determination of being free and unfettered, and, therefore, do not press upon you rules or anything of the kind for your guidance. All I now simply ask is, Will you act as a Judge for us? A large Show is about to take place under the management of the 'Poultry Club,' and we trust you will give us the benefit of your acknowledged ability, with another member or two of our

Club." To that Mr. Hewitt replied—"I can only assure you it will give me equal pleasure to officiate for the 'Poultry Club,' as for any other Committee of Management, the restrictions (as now, by you proposed), being withdrawn."

The above offer of a judgeship from the Club's Secretary and Mr. Hewitt's acceptance of the offer we considered conclusive.]

JOTTINGS ON DURDHAM DOWN.

"Tis first the true and then the beautiful,
Not first the beautiful and then the true."

SAID I to myself while wending my way through, or rather past, busy Bristol to beautiful Clifton. Plenty of the true in black, narrow-streeted, St. Mary-Redcliffe-shadowed Bristol, and still beautiful as ever stand out the town rocks of St. Vincent—there they are before me this bright shining Monday, June 13th. Now, I did not trust my reverend person to the jostlings sure to be met with on a busy day at the Bristol Station, but slipped out quietly at Keynsham, evidently to the wonder of the whole train. "Strange gentleman that not to be going to the Show!" The one porter at the little station was with difficulty prevailed upon to accept my ticket. The monstrous train at length rolled slowly on, and left me to go my own way. On, skirting pleasantly as I neared it, the great black city, missing all its horrors, and chuckling at my own escape and comparative freedom from trouble. Temple Street Station, well I know it on a busy day. Bristol roughs in a ring round; cabs running into omnibuses; omnibuses threatening cabs; wheels caught into wheels; your neighbour's cab horse putting his head into your cab and giving you a moist kiss (suggestive of glanders) on your right cheek, and you not at all inclined to offer him the other also. Then the narrow streets, with black artizans, and worn-looking, lack-lustre-eyed women gazing listlessly at one from every alley. Oh! this jolting Bristol may produce the best of floor-cloth, but it is not pleasant to be in danger of being floored. Oh! inodorous, dangerous, horrible streets, I have missed you all, and here I am on Durdham Down, raising my hat from my aching brow. I took three services yesterday, to enjoy the beautiful, ever beautiful Clifton air, which, like the water of the Nile, no one tastes and forgets, for taste the air you verily do.

Two years ago I was present at the meeting of the Society at Wells; so, well remembering it, I determined to compare the two all through. At Wells the Exhibition ground was good enough, and there was a capital view from it of the fine Cathedral, and the finer Glastonbury Tor; but to Clifton must be given the palm. There was a wide carriage-approach, and the Down turf and soil made wet feet impossible. Straight to the poultry show. Now, at Wells there was but one over-crowded tent, with the poor Pigeons put above the fowls (surely the latter should have had the cockloft). Here the Pigeons were as well seen as the fowls. As I was staying in the neighbourhood for a few days, and attended the Show both on Monday and Wednesday, "doing it" fully, I am prepared to give a more decided opinion upon some points than I could have done had I been present only one day. Was, then, the poultry tent a chief or secondary object of attraction? On Monday with some 7000 people present at this Show, it was pleasantly full; on Wednesday, with 18,000 present, the poultry tents were full all day, one regular stream of people; and on Thursday, when 50,000 people were present in the grounds, thousands I am told never did, or could, see one pen of fowls. At all times the poultry tent was quite as crowded as the horticultural, and more crowded than the fine arts tent. And why? Because God's works are more loved than man's, and living creatures with their ever-changing posture and attitudes bring out fresh beauties, and people, therefore, love to go and see them again and again. Oh! ye expellers of the Crystal Palace, Clifton Show condemns you. There I saw prim quaker ladies, fast-going ladies, invalid ladies on wheel chairs, enjoying to the full a show of—cocks and hens. I saw there church dignitaries, one chaplain to the Queen at least, I ran my elbow into a magistrate's

"Fair round belly with good capon lined."

I trod upon the toes of a bishop's nephew, and all these well-bred people had come to see—cocks and hens, which none

but low folks ought to care about. Well, never mind, I will not be angry. On to the birds.

Spanish.—"Ah! Mr. Rodbard, in your old place—namely, the first!" While I was looking at that wonderful cock bird, a kindly little man with a tailor visage said—"Poor fellow! it's a pity you're blind." The white corrugated skin was regarded by my little friend as a deformity, doubtless. *Dorkings*.—Lady Holmesdale's were giants: indeed, their ancestors which Julius Caesar ate were, I fancy, a trifle smaller; and those of which Sir John Falstaff partook at Justice Shallow's, were, perhaps, not so large either. Eight pens of White Dorking—very glad to see you, for you are the real original proper colour, and Mr. Clift, of Surrey, has kept up the fame of his county by taking first prize. *Cochins*, beautifully ugly as usual, and having no tails, must, on Lord Monboddo's theory, have more head, and, indeed, I think they had. The *Cuckoos* struck me as being very good. Next, *Game*, sixty pens in all, and, as a rule, what good pens! Mr. Fletcher, of Stoneclough, Manchester, I congratulate you upon your great success. Your first-prize Duckwing cock was, in my humble opinion, the most perfect bird I ever beheld, and wonderful was the condition in which he was shown. "Arn't he a pictur, Sir?" said a neighbour in fustian. "Never saw a picture equal to him, my friend," said I. Next, *Malays*, only three pens happily, their horrible ugliness increased by the bad feather in which they were in. They looked as if the cock had caught each, begun to pluck each, and had thrown down each in disgust, with "Drat the birds, they ain't worth plucking." Surely these horrible creatures ought to have been put in a dark corner; or they might at any rate have had a curtain hung in front of them, inscribed, "Malays, but not fit to be seen, the half dozen people in all England who admire these can inspect them after six o'clock." *Hamburgs* of all kinds good, but I thought the Spangled the best, and I was glad to see the too-much-neglected (in Wiltshire, certainly), Silver-spangled mustered strongly. *Polands*.—Mr. Edwards, of Lyndhurst, deservedly first, with a pair of the grand old Black and White Crests. May he breed many such. The "Any other variety class," always an interesting class, deserves a few words. *Brahmas* in abundance. What a pity they are not shown among the *Cochins*, as "Black-speckled *Cochins*." The Black *Hamburgs* have a very Spanish look, especially the hens. I fear Rose-combed *Spanish* would be the correct name. Just a word about the White *Spanish* pen marked "disqualified, cock's tail made up." They seem by the catalogue to belong to a lady, one I neither know nor know of; but in the spirit of that charity which hopeth all things, I will say that to my mind no deception was intended. The cock's tail was broken, very likely in the basket, and mended with cotton (this very injudicious), the mend was inches above the quill, and a child could see it. It needed not Mr. Hewitt's sharp and practised eyes. I pass over the sweepstakes, merely noticing Lady Holmesdale's monstrous Dorking cock. Really my body you, slightly to alter Shakespeare, "Have supped full of prizes." Now for the pretty *Bantams*. The black cock shown by Mr. Davies, of Newport, was the best I had ever seen; and Mr. Forrest's pen of Duckwings, the best pen I had ever beheld, with only one fault, they were a little too large for my fancy. The *Turkeys* were good; but why those "highly commended" did not take the second prize is to me a marvel, as they were certainly, unless my eyes deceived me, much larger.

Last, but not in esteem, came the *Pigeons*, and these were generally excellent. Carriers a goodly row. I think Carrier breeders should beware of getting their birds too small. I like the robust look blended with the elegant, such as I used to see in birds twenty years ago. Tumblers with heads perfect in roundness. *Pouters* large, but not in good form, feeling, perhaps, their confinement. *Runts*, would there were more. These are the Dorkings of *Pigeons*, and ought to be made profitable. *Jacobins*, the first-prize a little too large according to my judgment; delicacy of appearance should never be separated from a *Jacobi*, which is the type of a refined lady, hence an approach to coarseness is clearly wrong. *Fantails* very good, though I scarcely liked the *Turncrows* in the second-prize. The character of the *Fantail* head is, I hold, injured by the turn crown. The first-prize was excellent, and the birds robust, which they

should be. *Owls* extremely good, neat, and clean. So also the *Turbits*, which were numerous. May they always be as they are—distinct sorts. *Nuns*, not so excellent; but *Barbs* a treat to see, so wide were they in the forehead, and good in all points. *Dragons* were numerous, and Mr. F. G. Stevens showed a Buff pair with very excellent points. The *Trumpeters* were good. The first-prize birds, black and demon-like, with huge wings to their legs resembling Lord Dundreary's whiskers enlarged. *Archangels*, a great many. Among the "Any new and distinct variety" class, were some nice birds which would have surprised the old fanciers. The *Satins* were certainly very pretty. Last of all came the poor "wild Hawk," very wild, and very out of place, beating with bloody beak the iron bars. Oh! cruel fate, not unlike that of Tantalus, so many *Pigeons* to see, and never a one to eat, not even a little Almond Tumbler to convert into a roller. Poor Hawk! The fowls soon got used to the Show, and grew happily excited; the *Pigeons* endured it, but each day the poor Hawk was wilder and more unhappy. May I never see in a poultry-yard or a poultry show another "wild Hawk."

Now, to finish these jottings, let me say that the birds seemed well fed and well cared for. Such care was shown, that if a cock disliked his wives he was removed to another pen. They were likewise well supplied with water. Where the birds have large rose-combs the triangular troughs need to be pushed in a long way. I could ask for no improvement except more space for the *Turkeys*. I fear their quills were bent, and they not wholly comfortable. Much did I enjoy the Show. "Be that a Duckwing, Sir?" said a countryman of a *Pile* cock, and I acted as his showman, and soon found I gathered an audience. Even the crow of the *Cochins*, that long, lengthened *Alexandrine* crow, seemed to be a novelty to some, and called forth now and then a wondering "Lor my!" May the Bath and West of England Committee have ever the success they had on Durdham Down is the wish of—WILTSHIRE RACTOR.

TURKEYS AT THE BATH AND WEST OF ENGLAND SOCIETY'S SHOW.

We feel greatly indebted for your notice of us as "one of the most popular portions" of the late show at Bristol. Doubtless such would have been the case could we have been seen there; but we were placed on the ground, and no more space afforded us than that occupied by a *Bantam* cock over our heads. We heard repeated inquiries amongst the crowd for the *Turkeys*, and we have generally much to say for ourselves; but where was the opportunity for display when each masculine was squeezed with his partner into a pen of 2½ feet square?

May we entreat you to impress upon Committees of poultry shows, that when they invite giants to exhibit at their meetings the least they can do is to provide for their accommodation? We have the honour to subscribe ourselves your obedient servants.—CLASS 29.

DECLINE IN CHICKENS.

I AM happy to be able to give your correspondent "A. K. C." what I have found to be a sure cure for the croup in chickens, if this is the name of the complaint from which his suffered, as what they died from he does not distinctly state.

I have reared fifty-six Dorking chicks this spring. The three first broods were all attacked when about ten days old, and I was in despair. Having great experience in poultry-rearing like "A. K. C.," and finding all ordinary means fail, I doctor them as I should a human being with sore throat—viz., with sub-carbonate of ammonia, one tea-spoonful to a table-spoonful of water, and each chick had three or four drops at a time three or four times a-day. Every one recovered; but their fondness for me was turned into hatred, the remedy was so obnoxious to them.

As it is a certain cure, perhaps "A. K. C." will forgive this one bad effect. Soot is also a very good thing to put into their water.—A SUBSCRIBER.

[We think the disease for which our correspondent states

the remedy and calls the "croup," is that of decline and derangement of functions, to which chickens of a few weeks old are so liable, and drop their wings in that desponding mode which we have heard called "Putting on their Mourning Cloaks."]

I OBSERVED in your Journal of June 21st that your correspondent "A. K. C." complains of losing his Dorking chickens. I found great difficulty in rearing such from their being affected with drooping of the wings, after they were a week or ten days old, in the same manner as stated by "A. K. C."

I was recommended to try cow's liver boiled in water with a piece of soda the size of a walnut, and found it most beneficial. I have lost none of my chickens this year, although they began to show signs of drooping. The liver should be crumbled and given in their food.—H. A. F.

[Another correspondent recommends Baily's poultry pills.]

THE PRESENT POULTRY SEASON.

In the last Number of the "Poultry Chronicle" you ask poultry-keepers to favour you with their progress this season: if mine is worth inserting it is at your disposal.

I have a mixed stock, but the Cochins element predominates; and on the 29th of February I commenced the hatching season by setting thirteen Cochins eggs. This was followed after a few days' interval by other two being set. Out of the three lots my produce was two birds. Many of the eggs were filled, but the birds were dead. I attribute this unsatisfactory result to the cold weather then prevailing—cold enough in the south, but more so in Scotland. My hatching-boxes were placed outside, at the back of the garden wall, and covered on cold nights with matting. That plan succeeded well with me formerly; but this season's experience will lead me to be more careful, and place the boxes in a more sheltered situation in future.

After my three failures, however, I succeeded better. There was a fortnight's interval between the third and fourth sitting; and as by that time the season was farther advanced and the weather more moderate, I had no reason to complain of my success. From six to, in one case, fourteen chickens were the usual hatchings, and fine, strong, healthy birds. Of the fourteen lot the hen has brought up thirteen, one was accidentally killed by being trampled on. Of all I have hatched I have not lost one from disease; and I do not recollect in previous seasons having seen them so advanced at their age. I have a great respect for pure-bred fowls, but for usefulness find the cross-bred ones far excel them. The advantages they possess are that they arrive more quickly at maturity and have a harder constitution; and these are advantages which those who look principally to their useful properties cannot afford to despise.

I was told some years ago, when beginning poultry-keeping, that every egg would cost me 2d. I have never found that to be the case, but, on the contrary, the eggs we sell pay for the food consumed, and we have the eggs and chickens used in the house for our trouble; and all that is necessary to secure this result is to give them personal and particular attention.—AN AMATEUR.

UNHOUSING BEES—PRICE OF HONEY.

On the 14th of May I hived a swarm and put a super on immediately; this they filled, and on the 8th of June they began to cluster. On the 18th of June I thought they would have taken flight. I took off the super, which was apparently full of honey, but which turned out to have some brood in a very forward state in the centre of it, and put on another. I should state the front of my bee-house is boarded up, and in consequence of the boards warping a little the bees can get into the house. On the 20th of June and following days much rain with a rather high wind prevented any chance of a swarm, so that thousands took possession of a corner of the bee-house adjoining their hive, and built a great deal of comb. What ought I to do therefore? for I

cannot fumigate them, the house, of course, not being sufficiently air-tight.

I have put on several glasses this year, but not one have the bees worked in, although each had a ventilator. I have put on three straw supers, but only the one above mentioned has been at all used. How do you account for it?

Once more: I find poor people cannot get more than 6d. a-pound for their honey here, however good it may be. Where is the best place, therefore, to send it?—DUMPLING.

[Put on your bee-dress and gloves, and after blowing a little smoke from the fumigating-tube amongst the combs built in the bee-house corner, cut them boldly out and brush off the bees with a feather. They will supply excellent decoy-combs for your glasses, the want of which is the most probable cause of failure. Messrs. Neighbour & Sons, 149, Regent Street, and 127, Holborn, give a fair price for honey according to quality.]

LIGURIANISING AN APIARY.

WOULD "B. & W." say how he keeps his Ligurian and black bees from crossing in the same apiary.—A. W.

[In reply to the above inquirer, "B. & W." would state that he has hitherto not attempted to keep the Ligurians from crossing with the black bees, knowing it would be futile. By getting rid of all his black bees this year, "B. & W." hopes another year that all the drones in his apiary will be pure Italians, be they the offspring of his original purely impregnated Italian queen, or of those he has bred from her, but which are all, probably, impregnated by black drones. If not, there is no trust to be placed in the doctrine of parthenogenesis, for "B. & W.'s" apiary is a considerable distance from any other.]

SUPERING.

I HAVE a stock of bees in the common old straw hive with hole at top. On the 19th of May last they threw off a first swarm; same evening placed a small straw-cap hive on old stock, expecting them to fill it; they will not work in it. Will you kindly inform me what I am to do to obtain honey from them this season without destroying the bees?

My first swarm, which came off the 19th May last, now show strong symptoms of swarming. Can I do anything to prevent it or let them do so? Most probably both the old stock and first swarm will throw off a small cast each if allowed to do so. What shall I do with them?—O. O.

[If you wished to prevent swarming altogether you should have put a full-sized super on the stock in April. After swarming a super of moderate size may be placed on the swarm, not on the old stock, and this will, probably, prevent the issue of a "maiden." If you get two casts you had better unite them at once.]

OUR LETTER BOX.

DUCKLING DYING (*Constant Reader*).—It has been a very bad Duck season, and they have been scarce in consequence. The complaints we have heard have been more about hatching than rearing. Whenever Ducks are out of condition, they show it by a film on the eye. They are subject to cramp and it is fatal to them. We have never known one to recover when it proceeds from illness; but where it is caused by roosting in a house with a brick, stone, or wooden floor, they often get well if they are removed from it. Give them some oats put in a pan or other vessel with gravel.

DORKING COCK BUMBLE-FOOTED (*Inquirer*).—The large lumps in the feet, and the swollen legs indicate, we are afraid, a bad case. Dorking fowls, from their great weight, and the fineness of their skin, are always liable, after two or three years, to become "bumble-footed;" but their doing so is not inevitable; and if they have low perches, and proper floors, with a grass run, they may, as we have often seen, remain clean-footed, even though five or six years old.

SMALL BANTAMS (*T. D.*).—Those who wish to keep their birds very small, generally breed them late, so as to rear them when the weather is getting colder. We know no food that prevents growth.

MOTHS IN CORN BIN (*A. W.*).—Perhaps airing and turning the corn to prevent the moths breeding in it, and scalding the hoppers and corn boxes frequently, will prevent the evil.

BANISHING BEES (*Grateful Heart, Ipswich*).—We cannot tell you how to keep your neighbour's bees out of your garden.

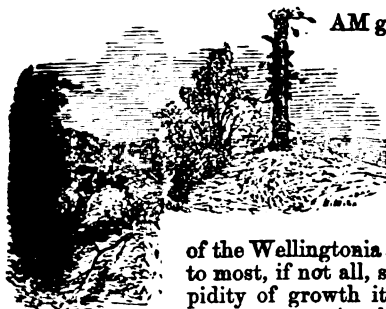
HORSES' MANGERS (*J. Frigge*).—We never heard of the machine.

WEEKLY CALENDAR.

Day of Month	Day of Week	JULY 12—18, 1864.	Average Temperature near London.			Rain in last 37 years.	Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock before Sun.	Day of Year.
			Day.	Night.	Mean.	Days.	m. h.	m. h.	m. h.	m. h.		m. s.	
12	Tu	Buckwheat flowers.	75.4	50.7	63.0	12	59 43	12 48	6 1	17 11	9	5 20	184
13	W	Traveller's Joy flowers.	75.8	51.5	63.8	13	0 4	11 8	14 2	45 11	10	5 23	185
14	Th	Oat Grass ripe.	76.1	51.5	63.8	14	1 4	10 8	22 3	morn.	11	5 34	186
15	F	Hedge Parsley flowers.	75.8	50.3	63.1	20	2 4	9 8	28 4	28 0	11	5 40	187
16	S	White Poppy flowers.	75.8	50.1	63.0	15	4 4	8 8	29 5	7 1	12	6 46	188
17	Sat	8 SUNDAY AFTER TRINITY.	75.8	52.0	63.9	15	5 4	7 8	24 6	5 2	13	6 51	189
18	M	Eyebright flowers.	74.7	51.0	62.9	18	6 4	6 8	11 7	12 3	14	5 56	200

From observations taken near London during the last thirty-seven years, the average day temperature of the week is 75.6°, and its night temperature 51.6°. The greatest heat was 92° on the 14th, 1847; and the lowest cold, 41°, on the 18th, 1840. The greatest fall of rain was 1.60 inch.

FAST-GROWING CONIFERS.



AM glad that the subject of remarkable Pinuses has attracted attention in your pages, and I willingly add my testimony to all that has been given as to the beauty

of the Wellingtonia and its adaptability to most, if not all, situations. For rapidity of growth it is second only to one or two species that I am acquainted

with, and possibly local circumstances may have given them an advantage which they might not enjoy elsewhere. Mr. Ridgway has given, at page 434 of the last volume, very minute particulars respecting the growth of the fine specimen at Fairlawn; and I believe there is a similar fine tree at Redleaf, near Tunbridge. Both of these specimens are two years or more in advance of the best that we have here, and which was not planted out until January, 1859, when it was 1 foot 9 inches high. The wet season of 1860, and the severe winter which followed, did not affect it further than that it was a little browned on its eastern side, and the growth of 1861 was less than before or since. At Christmas, 1861, it was 6 feet 6 inches high. I have not its dimensions for the following year, but last Christmas it was 12 feet 11 inches in height, having made a growth of 6 feet 5 inches in two years, and a corresponding increase in diameter of stem. The growth of last year may be considered the more remarkable when I mention that last summer, about the beginning of June, a squirrel or some other animal nipped off the leader, cutting off about 9 inches. Such a disaster, I admit, alarmed me at the time; but such is the accommodating character of the tree that it speedily formed another, and now it is not easy to see that it had lost a leader. We may, however, justly conclude that but for this accident the tree might have been a foot higher; as it is, the fact of the tree so quickly forming another leader, and assuming its true conical outline again, is worth recording.

Rapid, sturdy, and symmetrical as the growth of the Wellingtonia is, it is equalled if not excelled in these respects by *Cupressus macrocarpa* or *C. Lambertiana*, for I believe the two are identical. A plant of this, about 18 inches high, was planted out in April, 1854; and in December, 1861, it was 21 feet high and 13 feet through at bottom, dense and bushy to the ground, and of the deepest green, on which the sharp winter of 1860-61 did not seem to make the slightest change. It is now about 28 feet high or more; but at the end of the growing season I will measure it. So rapid-growing a tree requires careful handling when young. A tree that has been some time in a pot, and has its roots so twisted that it is impossible to lay them out perfectly straight in planting, will only be a disappointment; for the tree being much more

dense in its habit than the Wellingtonia, it is much more exposed to the wind, and if it is not very carefully planted in the first instance it will not be able to resist the wind. I have known more than one tree 6 or 8 feet high blown down in consequence of the roots at the collar still retaining the coiled form which they took while they were confined in the pot, and therefore offering little resistance to the wind. The one above alluded to was well attended to, and has hitherto maintained its upright position.

Differing very considerably from either of the above in character, but I believe equal to them in rapidity of growth, is *Thuja Lobbi*, a most graceful Fern-looking tree of the *Arbor Vitæ* class; but it appears to have a greater disposition to make a tree, sending up a long slender leader several feet in advance of the side shoots, which also have a tendency to point upwards. A young plant of this species in a sheltered position has made a growth of 9 feet in the last two years, the tree being now 13 feet high. *Thuja Lobbi* promises to be second to none for beauty, and being perfectly hardy, must prove a great acquisition. *Thujopsis gigantea* and *T. borealis* also promise fairly, but have not the spiral form of *T. Lobbi*.

Mr. Palmer asks for the dimensions of other Pinuses as well as of the Wellingtonia. It would either be better to give the heights during the past winter or wait until the season's growth is completed; but it may interest him to know that *Pinus excelsa* is here considerably above 30 feet in height, and perhaps 35 feet, and about the same in diameter, while *P. insignis* will by the autumn be fast approaching 50 feet high, and upwards of 40 feet through; *Cryptomeria japonica* is 35 feet or more, beautifully tapering; *Abies Smithiana* about the same, and dense and compact; *Picea pinsapo*, the finest of all, is a perfect cone, about 26 feet high or more, and densely clothed to the ground. Our largest *Deodar* had to be taken down for the benefit of another tree, and I hardly think we have any exceeding 38 feet high. An *Araucaria* has, however, attained the height of about 30 feet, and is a finely-formed tree. My purpose, however, is not to go into details, but to invite those interested in arboriculture to report such particulars about their trees as cannot fail to be useful to all concerned. As Pinuses sometimes exhibit growth of more than ordinary dimensions in particular situations, an inquiry into the cause may throw much light on their cultivation. As an example of rapid growth in a species not generally supposed to be fast-growing, I may instance a *Picea nobilis* which we have here, that will by the end of the present growing season have increased its height 10 feet or more.

Before closing these stray notes on Conifers I may remark that I hope to hear of other instances of fast growth, and of remarkably fine trees. The genial climate of Devonshire doubtless favours the growth of trees of many kinds which cannot be expected to become equally fine in a cold bleak district, but we now and then meet with fine specimens where they are least expected. Many years ago I remarked one of the finest *Araucarias* that I ever met with in an old garden in Northumberland. I

think the same enclosure also contained a very good Deodar, but of this I am not certain. I may also mention that although I am tolerably well conversant with Mistletoe growing on various trees in Kent, I have never noticed so fine a specimen of this parasite as I observed on an old Apple tree near the Araucaria above alluded to.

I shall be glad to hear how the species I have referred to, as well as others, succeed, and no doubt planters will be interested to know in the autumn where the finest Wellingtonia is to be seen. Though the particulars given by Mr. Palmer as to the height of the best-known trees are interesting, I should not wonder if changes in their relative heights take place, and some outsider, not thought of, be found at the head of the list. The subject is one well worthy of attention, and at a future time I promise myself to go further into details than I can with any degree of accuracy do now, the middle of the growing season necessarily increasing the altitude of trees considerably, and it would be better for those who report during this progressive period to mention what their specimens were in the past winter.

J. ROBSON.

CULTIVATION OF THE MELON.

(Continued from page 475.)

SOIL.—Various descriptions of soil have been recommended for growing the Melon, but none is better than a strong rich loam with plenty of vegetable matter. The turf cut to form loam for the Melon should be taken 4 inches thick from a pasture which rests on a bed of clay; and if it can be had from the rich warped lands bordering rivers such is decidedly to be preferred. These turves should be laid in a heap for twelve months and turned over twice, and a bushel of soot mixed with every cartload at each turning, to enrich the compost and to make it obnoxious to wireworms and other pests. The whole chopped up with a spade makes a compost suitable for growing any kind of Melon; but it often happens that substitutes have to satisfy the cultivator. Road-scrappings form no bad substitute, but they should be taken from a road noted for being muddy; and the materials forming the road must not be limestone, for Melons will not thrive in limestone. The road-scrappings, mixed with an equal bulk of well decomposed manure, and turned over occasionally for a year, make a very good compost for the Melon. The next best compost is ditch-cleanings turned over once or twice for a year; and if the cleanings are little besides clay mud mingled with tree leaves, so much the better. With the ordinary strong soil of gardens Melons may be grown very well; but light composts of whatever kind are valueless for Melon culture, yet they may be made to afford some fair fruit by adding an equal quantity of cowdung, and turning them over frequently so as to thoroughly incorporate the mass.

The above are all improved by being exposed to the influence of the atmosphere for a year. The compost should be made firm by treading or beating after being placed in the frame, in order to force the roots to run slowly through the soil, and give a stiff short-jointed growth.

PLANTING OUT.—The bed being covered with one of the composts, and all being in proper order as to bottom heat, sweetness of atmosphere, &c., select the pots that contain the shortest-jointed plants—that is, those of which the leaves are nearest to one another; and any that have lateral branches shooting from the neck of the plants are to be preferred to those that have none. Turning the pot upside down, and gently tapping the edge against the edge of the frame, the ball will come out entire. Plant this immediately in the centre of the cone, in the hole, so that the cone, after the plant is put in, may be 9 inches higher than the 3 inches of soil with which the bed is covered. The top of the cone or hillock should be rounded a little to hold water, and the soil having been pressed rather firmly round the ball, give a gentle watering to settle the earth about the roots, using water of the same temperature as the frame. In this manner plant the remainder of the lights. Two plants are sufficient for one light after March, but earlier in the season three are requisite as they do not grow so vigorously; but if they do, and there is any fear of the frame becoming too full, it is easier to cut a plant away than to plant to fill up the vacant space if a plant go off. Air will now be needed daily in mild and sunny weather, the amount being regulated by

a thermometer within the frame. For about a fortnight after planting the temperature should be 70° at night, and 65° afterwards; but when the fruit is ripening a temperature of 75° much improves the flavour, especially if accompanied by a corresponding dryness. Air should be admitted when the thermometer is at 80° if there is a prospect of more sun, and the frame should be closed with the thermometer indicating 85°.

ADMITTING AIR.—It is important to do this without causing draughts of cold air, and in the early stages, when the external air is cold and cutting, a thin mat or piece of tiffany or hexagon netting placed over the openings will admit sufficient fresh air, and yet prevent the deleterious effects of cold. As the season advances air will be needed in larger quantities, regulating the time of opening and shutting up by the thermometer. Begin in the morning by opening the frame a little at the back, and then open wider as the heat increases. I know of no better contrivance for admitting air to frames than the notch system, in which a wedge is usually made out of an inch deal board, and cut with a saw to represent steps, the first of which is 1 inch wide and 1½ inch long, and cut slantingly, so that the lights can be elevated half an inch or an inch. The other notches are 1½ inch wide and long, and are generally four in number. The accompanying engraving (fig. 1) will show this useful contrivance, which is decidedly preferable to sliding the lights down, as this causes a current of air

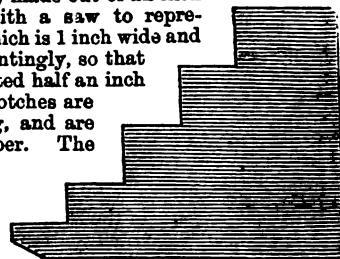


Fig. 1.

at once by the escape of hot air at the back, and the ingress of cold in front to supply its place. This is extremely injurious to any plant, for by ventilation we seek to displace foul air and supply its place with fresh; but no one would seek to enjoy fresh air by opening two doors or windows from opposite points, and then sit down between the two in the full current of air. If such draughts are injurious to man they are equally so to vegetation. In giving air to Melons it is well to give a little air as early in the morning as safe, say a notch or half a notch as the case may be, and to increase the width of the opening as the sun increases in power during the forenoon, reducing the opening again in the afternoon in proportion to the decline of sun heat.

WATERING.—It is necessary that the plants be watered moderately when planted, for the moistness of the heat assists in keeping the soil moist—so much so, indeed, that early in the season very little water is required. Waterings, at first, must be given near the stems of the plants, but as the roots extend and reach the sides of the hillock more soil must be piled round it.

ADDING SOIL.—It should be placed in the frame twenty-four hours to get warmed before it is placed in contact with the roots. This fresh soil must afterwards be watered in place of that near the stem, for the Melon is at all times extremely susceptible of moisture at its neck and main branches. More soil must be added as the roots extend, so that about three earthings will be necessary at intervals of a fortnight, to cover the bed all over to a depth of 8 inches for early Melons. This will leave the stems slightly elevated, and so prevent water reaching the neck at the time of watering. It is imperative to keep the neck dry, or the plants will almost to a certainty canker there, and the result will be a loss of crop or immature badly flavoured fruit. For the second crop of Melons it is only necessary to earth the bed twice after planting, covering it to the extent of 10 inches; and for later crops it is not necessary to wait longer than a fortnight or three weeks before covering the bed with 1 foot of soil. In all cases the soil should be made firm, for Melons enjoy a firm strong soil. Water should be given once or twice a-week as the state of the soil may determine, it being essential to have the soil moist but never sodden, so that the plants may grow freely from the time the fruit appears up to the time of its maturation.

FRUIT SETTING.—A moist condition of the soil being necessary to insure free growth,—light, air, and temperature

making that growth stiff or long-jointed, fruitful or barren, in proportion as they are judiciously or carelessly administered,—so is it desirable to have the soil in a healthy moist condition when the plants are in flower; at the same time, as is well known, the surface of the soil, at any rate the atmosphere, should be dry at the time of setting, otherwise the blooms set very indifferently. Though a rather drier state of the atmosphere assists in the process of fecundation, yet I am certain that the real cause of Melons being so uncertain in setting is not the moisture of the atmosphere, but a sluggish root-action owing to the bottom heat being slack; and in many cases the soil is dust dry, and can scarcely keep the leaves green, much less support a flower and swell the fruit. Keeping the frame close at the time of setting also prevents the pollen from being properly aired, which is a certain cause of not setting. I am not quite sure, but am inclined to think, that Melons and all other plants require quite as much moisture at the root at the time of flowering as at any other time; and though the pollen of any plant may be more freely distributed during dry weather, I am certain that a moderate degree of moisture is necessary to insure its perfection and consequent fertility. For a sure method of making Melons set, I know of nothing better than giving a good watering a day or two before the flowers are likely to open, to have the bottom heat brisk, and to admit abundance of fresh air, which cannot be given to Melons on dung-beds in dull weather unless the bottom heat be brisk. It is to want of air and active root-action that I attribute the difficulty experienced in getting Melons to set in frames. I may, however, be wrong; but I never experienced any difficulty in this respect in pits heated by tanks and hot-water pipes. While the fruit is setting no water should be given so as to wet the surface of the soil much; but if any be needed it should be supplied through drain-pipes with one end inserted in the soil to the depth of an inch. These, distributed 18 inches apart, will enable any one to water the bed without wetting the surface, for it is only necessary to fill the drain-pipes with water and leave it to sink into the soil. This is not a bad method of applying water to the roots after the vines fill the frame, especially in dull weather, when water on the stems is certain to cause "gout," if I may coin an expression, or a gummy exudation from the branches.

(To be continued.)

G. ABBEY.

ROYAL HORTICULTURAL SOCIETY'S SHOW.

JULY 6TH.

THIS, the last of the great summer shows, was well attended by exhibitors, by visitors interested in horticulture, and by many more belonging to neither class, who were drawn to it by the presence of their Royal Highnesses the Prince and Princess of Wales. Notwithstanding the large numbers who visited the Exhibition, at no time were the Exhibition tables overcrowded—a circumstance which can only be accounted for by the preponderance of the non-horticultural element, and the superior attractions for such of the fresh air and military bands. It must, however, be admitted that but for the flowers there was little to induce a prolonged stay in the arcades; for the dust was swept up by the ladies' dresses, and the stages for the plants were remarkable for their ugliness. They consisted of bare boards which had once been green, but had become of a nondescript hue between green and earth colour. How different this from the fresh green turf banks of the Regent's Park!

STOVE AND GREENHOUSE PLANTS.—These were for the most part the same as at the Royal Botanic Show on the previous Saturday. Among them were fine examples of *Ionas alba* and *salicifolia*, *Kalosanths*, *Aphelaxes*, *Vincas*, *Ericas*, *Hederae*, *Dracophyllum gracile*, *Allamandas*, *Dipladenias*, &c. *Pleroma elegans* was shown in fine condition in several collections. *Sollya linearis* with drooping blue flowers, and *Mussaenda frondosa* with its large white calyx and small yellow flowers, were also very attractive. For twelve Mr. Fraser was first, Messrs. Lee second, Mr. Williams third; for nine, Mr. Peed first, Mr. Chilman second, Mr. May third, extra Mr. Wheeler; for six, Mr. Page second; for six (Nurserymen), Mr. Rhodes first, Messrs. A. Henderson second.

FINE-FOLIAGED AND VARIEGATED PLANTS.—Mr. Baines, gardener to H. Micholls, Esq., Bowden, took the first prize with a remarkably fine collection, of which the narrow-leaved variegated *Croton*, *Theophrasta imperialis*, a very large and fine *Gleichenia speluncæ*, and *Alocasia metallica* with magnificent leaves, were the most noticeable. Messrs. Lee were second, having their large *Cordyline*, and fine specimens of *Neottopteris australasica*, *Cibotium princeps*, *Rhopala magnifica*, and other plants which have been noticed in previous reports. Variegated plants were confined to *Caladiums* and *Ferns*. Of the former, Mr. J. Veitch, of Chelsea, had the finest collection. It contained magnificent plants of *argyrites*, *Baraquinii*, *Houlletii*, *Troubetskoi*, *Belleymei*, *Lowii*, *Chantini*, and *regale*. Messrs. A. Henderson were second, their plants being also very large and fine. Their collection contained of kinds not already named, *pæcile*, *mirabile*, *Wighti* (very pretty), and *bicolor magnifica*. In variegated *Ferns*, Mr. Bull was first with *Pteris tricolor*, *argyræa sublobata*, and *albo-lineata angusta*. Mr. Young was second with *Pteris tricolor*, *argyræa*, and *cretica albo-lineata*.

FERNS AND LYCOPODS.—For twelve exotic species, Mr. Bull took the first prize with a fine collection, consisting of *Cyatheas*, *Dicksonias*, *Gleichenias*, *Cibotium princeps*, *Marattia elegans*, *Microlepia platyphylla*, &c. Mr. Martin, gardener to J. Taylor, Esq., Woodberry Down, was second; and Mr. Young third. For British Ferns, Messrs. Ivery had first and third prizes, and Mr. Salter, of Hammersmith, the second, the collections of both containing many pretty forms. *Hymenophyllums* and *Trichomanes* were shown in good condition, especially *demissum*, by Mr. Watson, St. Albans; *Lycopods* by Messrs. Higgs, Young, and Ingram, each of whom took a prize. Among the pans exhibited were fine examples of *Galeotti*, *Martensii*, *dumosa*, *umbrosa*, *microphylla*, *cæsia*, and *apoda*.

ORCHIDS chiefly consisted of *Cattleyas*, *Vandas*, *Lælias*, *Ærides*, *Saccolabiums*, and *Oncidiums*, many of them large specimens and in excellent bloom. Most of them, however, have been noticed in previous reports. Of *Ærides* *Larpetæ* two or three fine examples were shown. *Vanda teres* came from Mr. Williams; and from others *Oncidium divaricatum* with showy yellow, orange, and brown flowers, *Epidendrum crassifolium*, *Phajus albus*, very fresh and pretty, and *Ærides affine superbum* with seventeen spikes of bloom, large and small. Among *Anætochils*, *Lowii* and *macodes petola* were well shown by Mr. A. Ingram, of Highgrove, who had first prize in that class.

The prizes awarded were:—For *Ærides*, &c., Mr. Baker first, Mr. Milford second; for *Cattleyas* and *Lælias*, Mr. Milford first, Mr. Baker second; for nine Orchids (Amateurs), Mr. Baker first, Mr. Milford second, Mr. Penny third; for nine (Nurserymen), Mr. Williams first, Mr. Parker second, Mr. Woolley third; for six, Mr. Wiggins first, Mr. Baker second, Mr. Page third.

PELARGONIUMS.—Mr. Bailey, Shardeloes, was, as usual, first in the Amateurs' Class. His plants consisted of *Lady Canning*, very fine; *Lord Clyde*; *Sir C. Campbell*, very large and profusely covered with bloom; *Desdemona*; *Etna*; and *John Leech*. Mr. Wiggins was second, *Maid of Honour*, *Kettledrum*, and *Regina formosa* being the best. In the Nurserymen's Class, Messrs. Dobson & Son were first, *Caractacus*, *Queen of England*, and *Lord Clyde* were the most noticeable; and Mr. Fraser second. In Fancies, Mr. Bailey was again first with fine plants, but not equal to those exhibited a month ago. The varieties were *Madame Rougière*, *Ellen Beck*, *Edith*, *Delicatum*, *Princess Royal*, and *Queen of the Valley*. Mr. Shrimpton, gardener to Mrs. Doxat, Putney Heath, was second; his *Roi des Fantaisies*, *Cloth of Silver*, and *Lady Craven* were very good.

Scarlet *Pelargoniums*, for which there were several classes, were a new feature, and one which promised to become very interesting and instructive. When further experience shall have been gained in the exhibition of these plants improvements will no doubt suggest themselves from time to time. For twelve distinct kinds, of any colour, zonal or plain-leaved, Mr. Fraser was first. Among the best were *Virgo Marie*, a beautiful white; *Leoni*, salmon; *Comte de Morny*, *Woodwardiana*, rosy carmine; *Madame Vaucher*, and *Rose Rendatler*, bright rose. Mr. Salter was second; Helen Lindsay, *Amelina Griseau*, and *Merrimac*, the latter with an immense truss, being particularly good. *Rubens*, a fine

salmon rose, came from Mr. Duke, Finchley, who was first for six.

Of the variegated-leaved kinds the best of those shown were Mrs. Pollock, Mountain of Snow, with pure white margin; Golden Vase, fine golden foliage. Mr. Fraser had the first prize in this class, and also in that for six scarlets; of these Martin Gireau and Attraction were very fine.

In Nosegays Mr. Salter was first. Model Nosegay, pink, Lord Palmerston, and Merrimac were fine.

MISCELLANEOUS.—Under this head it will be most convenient to group the remaining classes. Mr. Rhodes had a first prize for Heaths, of which *amabilis*, *Paxtoni*, and *Fairreana* were excellent. Mr. Watson, Clapham Park, had a similar award for *Disa grandiflora* and its variety *superba*, the bright scarlet blooms of which were very striking. Mr. McLellan, Barnet, exhibited some large and well-grown *Begonias*; Mr. Baines, *Sarracenia*s and *Anæctochilus Lowii* in fine condition; Mr. Higgs, Putney Heath, three standard *Fuchsias* about 10 feet in height, and in excellent bloom; Mr. Collins, gardener to Major R. Trevor Clarke, Cotton, Tea, and Coffee plants; Mr. Bull, Green and Black Tea, also a collection of medicinal and officinal plants, such as *Vanilla*, *Cotton*, *Ginger*, *Quassia*, *Pepper*, &c., under their scientific and popular names. Mr. Bull and Mr. Williams also contributed collections of their new plants, most of which have been previously noticed, and others that will be referred to in our Floral Committee report. Mr. Salter had a dwarf *Sedum*, which is used with good effect as an edging at his nursery at Hammersmith; Messrs. Veitch, *Lilium auratum*, and their fine white *Lapageria alba*, also a collection of garden Turnips; and Messrs. E. G. Henderson, plants with ornamental foliage for the summer decoration of flower gardens. Stands of cut flowers, consisting of *Carnations*, *Pinks*, *Pico-tees*, and *Pansies*, were sent by Messrs. Turner, Hooper, and Weymouth. Roses were shown in good condition by Mr. Turner and Messrs. Paul & Son; and, finally, hanging-baskets, tastefully filled, by Mr. Williams, and A. Henderson and Co.; and plant cases and ornamental stands by Messrs. Barr & Sugden. Numerous prizes having been awarded for the various objects above enumerated, we must refer to the prize list for the names of those who were successful in taking them.

FRUIT.

The show of Fruit was very limited in extent, though the quality of that exhibited was good. When one calls to mind the palmy days of Chiswick when a hundred Pines were staged in one day, it looks something like retrogression to find only fourteen. The Grapes and Strawberries were finer than in the old times, but the best of the Peaches and Nectarines were nothing extraordinary.

Of Pines the best Cayenne came from Mr. A. Henderson, one of the Smooth-leaved variety. Mr. Brown was second with a Prickly Cayenne of 5 lbs. In Queens the best came from Mr. Grant, Finchley; Mr. Cawkill, and Mr. A. Henderson. Mr. Hannan and Mr. Bailey were first in the Any variety Class, the former with a Providence, the latter with an Enville, very fine. Mr. Kerfoot was second with Black Prince, weighing 9 lbs. 2 ozs., and third with a New Providence of 8½ lbs.

In Grapes the best Black Hamburgs came from Mr. Meredith and Mr. Petch, and very good they were; Mr. Sawkins was second, Mr. A. Henderson third. Mr. Meredith also had a first prize for Black Frontignan. In the class for Any Black variety Mr. Hill was first with his enormous bunches of Black Prince, Mr. Cross second with fine bunches of the same kind, Mr. Brown third.

In Muscats Mr. Sage stood first, Mr. Turner second, Mr. Embrey third. Buckland Sweetwater from Mr. Hill, the three bunches weighing 6 lbs. 3 ozs., was first in the class for that variety, Mr. Goldsmith being second. The best Golden Hamburgs came from Mr. C. Smith, Norwood, the bunches and berries large; Mr. Bain was second. In Any White kind long bunches of Chaptal, from Mr. A. Henderson, were first; Canon Hall Muscat, from Mr. Embrey, being second; and Foster's Seedling, from Mr. Meredith, third.

In Noblese Peaches Mr. Tillery, Welbeck, was first, Mr. McLellan second; in *Violette Hâtive*, Mr. Sawkins first, Mr. Sage second, and Mr. Brown third, the fruit of all being fine; in *Grosse Mignonne* Mr. Robinson, gardener to E. Benyon, Esq., M.P., was first, Mr. Tillery second.

In Nectarines finely ripened Pitmaston Orange came from Mr. Cross, and highly coloured fruit from Mr. Brown, who was second; and in Elruge Mr. Cross, and Mr. Wills, Oulton Park, were first with excellent fruit of that variety.

The best Figs were Brown Turkey from Mr. Robinson and Mr. A. Henderson.

In Cherries Black Tartarian, very fine, from Mr. Turner, were first; Elton, from Mr. Widdowson, second; Black Tartarian, from Mr. Sawkins, third.

Strawberries generally were very good. In single dishes Mr. Widdowson was first with Admiral Dundas; Mr. Budd, Cobham Hall, second with Empress Eugénie; Mr. Kaile third with Admiral Dundas, one berry of which was of remarkable size and about 2 ozs. in weight; and Mr. Beasley, Twyford Abbey, had an equal third prize for Sir Harry. In six dishes Mr. Bailey was first with Filbert Pine, Oscar, Bicton Pine (a large white variety), Sir C. Napier, Wonderful, and Admiral Dundas, all of which were large and fine. Mr. Widdowson was second, Mr. Budd third.

Melons were not numerous. The best Green-fleshed was Oscar, from Mr. Bailey; and in the Scarlet Class Windsor Prize, from Mr. Goldsmith, was first.

Of Miscellaneous Objects, excellent Barrington Peaches were shown by Mr. Petch; very large and fine Brunswick Figs by Mr. Robinson; Vines in pots by Messrs. Lane and Son and Mr. Standish; Orchard-house trees in fine bearing, consisting of Peaches, Nectarines, and Plums, by Mr. Cocks, Clapham Park, and Messrs. Lane, the latter also having a collection of Apples, Pears, Cherries, Figs, &c.; Orange trees by Mr. Higgs, gardener to Mrs. Barchard; Strawberries in pots by Mr. Turner; Raspberries by Mr. Young, Highgate, and Mr. Sawkins; and good Grizzly Frontignan Grapes by Mr. Beasley.

FLORAL COMMITTEE, JULY 6TH.—One of the most beautiful of the Exhibitions of the season was held in the Society's Gardens, South Kensington, on this day. The introduction of prizes for collections of Scarlet Pelargoniums promises to be a success, judging from the several excellent collections brought forward for competition. Next year we hope to see many more exhibitors in this class. Several certificates were awarded by the Sub-Committee for examining new plants. Mr. Veitch, of Chelsea, received a first-class certificate for *Quercus sp. nova*, from Japan; and a commendation for *Linum Chamissonis*. Messrs. Ivery, Dorking, had a first-class certificate for *Polypodium vulgare pulcherrimum*, and *Polystichum aculeatum acrocladon*. Messrs. Jackman and Son, of Woking, had *Clematis viticella pallida*, new in shade of colour, pale pink, fine form—second-class certificate; and *Clematis viticella Mooreana*—commendation. J. Day, Esq., Tottenham, sent *Polychilus cornu-cervi*, a small-flowering Orchid, for which he received a commendation. From Mr. Bull, Chelsea, came *Cypripedium Hookeri*, *Ophioglossum palmatum*, and *Salpichlœna volubilis*, all of which received first-class certificates; also, *Pandanus Blancoi*, which was awarded a second-class certificate. Mr. Watson, St. Albans, sent *Astelia bivitata*, a graceful foliaged plant—commendation; Messrs. A. Henderson, *Gardenia variegata floribunda*—first-class certificate; Mr. Williams, Holloway, *Erica Lindleyana*—first-class certificate; *Dendrobium Moulmeinense*—first-class certificate; *Beaucarnea species*—first-class certificate; *Nidularia Innocentii*—first-class certificate. Mr. Baines, gardener to H. L. Micholls, Esq., Bowden, sent an *Ixora*, from Moulmein, which received a commendation. *Anthurium sp.*, from the Society's Garden at Chiswick, a plant sent home by Mr. Weir, had a second-class certificate; it is a handsome *Caladium*-like-foliaged plant.

Among the florists' flowers but few certificates were awarded. Messrs. Smith, Dulwich, sent seedling Scarlet Pelargoniums *Pactolus*, *Model*, *Bright Eye*, *Princess Alice*, *Mary Ann*, in no way improvements on older sorts; also *Princess Mary*, a handsome variegated seedling, but not equal in foliage to many others. Mr. Watson, St. Albans, had *Calceolaria Beauty of Herts*, light orange brown, like *Kentish Hero*, of dwarf habit, free flowering, and a useful bedding variety—second-class certificate; *Calceolaria General Tom Thumb*, very dwarf, compact habit, with small bright yellow flowers, very free flowering—this also received a second-class certificate as a good variety for edging purposes. Mr. Salter, Hammersmith, sent a seedling Scarlet

Pelargonium Mr. G. Natchet, bright scarlet; fine bold truss of good compact form, thrown well above the zonate foliage: this will make a fine specimen plant: it received a second-class certificate. Scarlet *Pelargonium* Ornament de Massifs also came from Mr. Salter. It was an imported variety; the flowers had in form, but novel in colour, shaded purple and carmine. It was commended as a decorative plant and useful flower for hybridising. If its colour could be secured in a flower of perfect form and good substance, which doubtless will be done, something beautiful and novel would be the result. Messrs. Downie, Laird, & Leing sent Scarlet *Pelargonium* Golden Sceptre, one of the innumerable varieties of Mrs. Milford. Mr. Wills, Oulton Park, sent *Verbena* Ariel and *Verbena* Helena; Messrs. E. G. Henderson, Wellington Road, Fuchsia *Lucrezia Borgia*, a large-flowering kind with expanded corolla, light red broadly striped with purple, bright red sepals—first-class certificate; Fuchsia *Sunshine*, crimson sepals, with pale lavender corolla; Fuchsia *Don Giovanni*, pale crimson sepals, with greyish expanding corolla; Oberon, reflexed crimson sepals, dark corolla; Charming, very much resembling *Crinoline*; Il *Trovatore*, white waxy sepals, rosy corolla edged with carmine; *Verbena* Velvet Cushion, noticed last week; *Petunia* Cinderella, semi-double greyish-veined flower; *Petunia* Princess of Wales, semi-double, pure white striped with mauve. Messrs. E. G. Henderson also sent a collection of their beautifully variegated-foliaged seedlings, many of which had been seen before, and received certificates.

Mr. G. Lowe, Beeston, had a very beautiful collection of cut Show and Fancy Pansies; Mr. Hally, Blackheath, Scarlet *Pelargonium* Monitor, of the Marbled section, with zonate foliage; Mr. Keeler, two seedling Scarlet *Pelargoniums*—Noble, a fine truss, with zonate foliage, and Alba floribunda, very similar to the former, perhaps more abundant in producing its trusses—both good flowers, but not superior or equal to Madame Vaucher or Virgo Marie. From Mr. Turner, Slough, came *Picotée* Princess of Wales, white ground, light delicate purple edge, fine petals, a most beautiful variety—first-class certificate; and from Mr. Vocknies *Gloria* Princess Alexandra. Mr. Hooper, Bath, sent seedling Pink British Queen; seedling *Carnation* Duke of Cambridge, rose flake, coarse flower; Pansy Snowball, pure white, with dark centre, a very superior and distinct variety—first-class certificate; Pansy Yellow Beauty; and Perfect Model, dark purple. Among other Pansies in the stand we noticed Bob as a very fine flower, dark maroon upper petals, yellow ground, good eye, deep belt, fine form; and Harry, dark purple upper petals, white ground, good eye, belted with purple, a very fine flower.

FRUIT COMMITTEE (G. F. Wilson, Esq., in the chair).—There were exhibited three excellent bunches of the Duchess of Buccleuch Grape from Mr. Thomson, of Dalkeith. This, which has already had a first-class certificate awarded to it, was in excellent condition, and, for the produce of a pot vine, the bunches were unusually large, and the flavour exquisite.

Mr. Turner, of Slough, exhibited a seedling Strawberry called Sir Joseph Paxton. It is not one of those soft, pappy, fluted, cockscomb-shaped sorts, of which we now have so many, but a handsome and regularly-shaped ovate fruit, with a solid firm flesh, of a rich flavour, reminding one of that of the *Hautbois*. It was awarded a first-class certificate.

Mr. Ward, of Oxford, sent a seedling Strawberry which seemed, from its colour, as if it had a dash of the Black Strawberry in its breed, but it was not sufficiently rich in flavour to command an award.

A Black Grape from Oran was exhibited by Mr. J. G. Cocks, gardener to J. Cundell, Esq., Clapham Park. The berries were rather large, and hammered in an extraordinary way; but the flesh was hard, hollow, and flavourless, as many of those African and Asian Grapes are.

DEATH OF MR. DANIEL FERGUSON.—Mr. Ferguson, Curator of the Royal Botanic Garden, Belfast, died there on the 5th instant, aged sixty-two. He was a native of Perthshire, and was for a long time foreman of the Glasgow Botanic Garden, at which place he assisted in getting up specimens, &c., for Sir Wm. Hooker's (then Dr. Hooker) botanical lectures, and on whose recommendation he was

appointed to the curatorship of the Belfast garden twenty-eight years ago. He was well known in Ireland as a landscape gardener, and was very much employed in the north. His decease will be heard with regret by many; for he was not only able in his profession, but kind, courteous, and honourable. We are glad to hear that the Directors have signified their intention of appointing as his successor his son Mr. W. Hooker Ferguson; for his successor has been trained in the gardens under his father, and is of acknowledged high attainments, not only as a botanist, but as a cultivator.

THE ROYAL BOTANIC SOCIETY'S SHOW.

(Concluded from page 6.)

HEATHS were in great perfection. Among them were some splendid plants of *Parmentieri rosea*, *ventricosa Bothwelliana*, *obovata*, *Savilleana*, and *Fairreana*. The last-named, also nobilis and Paxtoni, were very fine in Mr. Rhodes's collection, which took the first prize in the Nurserymen's Class for ten, Messrs. Jackson & Son being second, and Mr. Baxendine, Guildford, third. In the Amateurs' Class for eight Mr. Peed was first, Mr. Wheeler second, Mr. Page third, and extra prizes were awarded to Mr. Chilman and Mr. May.

FUCHSIAS.—Of these several collections were shown in excellent condition. Rose of Castille, Lord Elcho, Madame Corneliussen, Fair Oriana, Souvenir de Chiswick, Fairest of the Fair, and Senator were the leading varieties. Mr. Cannell was first; Mr. Cross, second; Mr. Weston, third; Mr. Hayes, fourth.

PELARGONIUMS, although less numerous than at the previous Show, and not equal in size and profusion of bloom to the enormous plants then exhibited, were, nevertheless, very good, especially those from Messrs. Dobson, Mr. Fraser, and Mr. Bailey. Queen of Whites, white spotted with carmine, was very attractive; Lord Clyde and Conflagration were very striking from their rich glowing colour. Of *Desdemona*, *Etna*, and Sir Colin Campbell splendid plants were shown; Sanspareil, Perdita, Illuminator, and Empress Eugénie being also fine. For twelve (Nurserymen), Messrs. Dobson and Sons were first, Mr. Fraser second; for ten, Mr. Bailey first, Mr. Wiggins second; for plants of large size, Mr. Bailey first.

There was in addition a class for new *Pelargoniums* sent out in 1861 and 1862. In this the first prize was awarded to Mr. Bailey for Beacon, Pericles, Regina formosa, Landseer, Royalty, and Royal Albert; and Mr. Fraser took the second. But the best collection in the opinion of the Judges was that sent by Mr. Wiggins, of Isleworth, but which was disqualified for not being in accordance with the rules, there being varieties more recent than the years named. They consisted of Eurydice, white, with deep crimson upper petal and light edge; Royal Albert, rose, white centre, large dark blotch; Paris, rosy pink, maroon top; Diana; Maid of Honour, a very pleasing lilac; and Regina formosa.

In Fancies, Mr. Fraser was first in the Nurserymen's Class; and Mr. Bailey first, and Mr. Shrimpton second, in that for Amateurs. Cloth of Silver and Delicatum among light varieties were very beautiful and in profuse bloom; Ellen Beck, *Roides Fantaisies*, Princess Royal, Sarah Turner, and Lady Craven were also sent in fine condition.

Of Scarlet *Pelargoniums* large plants were shown by Messrs. Catlin, Pettit, Duke, and Windsor, who each received prizes in the order in which they are named. Some of the plants, however, had their trusses tied down in a very objectionable manner. Of the varieties shown, Vivid was perfectly dazzling; David Manning had large bright flowers; Madame Vaucher, though not in full bloom, was evidently the best of the whites.

CUT FLOWERS, consisting of Roses, Pinks, and Pansies, were numerous exhibited. The former consisted of the same varieties as shown at Kensington on the previous Wednesday, and it would be useless repetition to record the names of the best. For fifty, Messrs. Paul & Son and Mr. Turner had first prizes. Mr. Cant was second, Mr. Fraser third; for twenty-five, Mr. Ingle first, Mr. Exell second; Mr. Wright, gardener to Mrs. Ramsden, third; for twenty-four, Messrs. Paul & Son first, Mr. Turner second, Mr. Cant third. Of Pinks several very fine stands were shown by Mr. Turner, Mr. Hooper of Bath, and Mr. Hall. Car-

nations and Picotees were also shown in fine condition by Mr. Turner; cut Pelargoniums by the same; Pansies by Messrs. Downie & Laird, and Hooper; and Sweet Williams by Mr. Hally, Blackheath.

NEW PLANTS.—Many of those exhibited have already been frequently noticed in these pages, and it is, therefore, unnecessary to repeat their names. The beautiful white-flowered *Lapageria alba*, however, which came from Messrs. Veitch, and *Lilium auratum* cannot be allowed to pass unnoticed. Mr. Williams, of Holloway, was awarded first-class certificates for *Beaucarnea* sp., for a *Hemerocallis* with distinctly white-striped leaves, and for a *Yucca* having thread-like appendages at the margin of the leaves. A second-class certificate was awarded to the same exhibitor for a variety of *Mimulus cupreus* with the leaves much variegated with white. Mr. Bull had a first-class certificate for the magnificent and scarce new *Araucaria Rulei*, which was shown along with one of its long cones; also, for *Canna nigricans* with dark red leaves; for *Salpichlœna volubilis*, a Fern of twining growth; and for *Geonoma Ghiesbreghtii*, noticed last week. Second-class certificates were given to Mr. Bull for *Pteris albo-lineata angusta*, with narrow fronds having the central portion white; for *Peperomia arifolia* with prettily variegated deep green and white leaves; and for *Pandanus Blumei*.

Messrs. F. & A. Smith again exhibited their new *Lobelias*, of which compacta was the best for dwarf edgings, having at the same time large flowers; and *Gordoniana superba*, azure blue with a white eye was a very fine kind of taller growth.

Dendrochilum filiforme, an Orchid with long racemes of small greenish yellow flowers more curious than beautiful, came from Mr. Lawrence, gardener to the Bishop of Winchester, Farnham Castle; and a brilliant variety of *Disa grandiflora*, called *superba*, from Mr. Watson, gardener to C. Leach, Esq., Clapham Park.

Messrs. Low, of Clapton, had first-class certificates for two very fine new Heaths, one of which was called *Lindleyana*, the other *venosa*; and a similar award was made to Messrs. A. Henderson for *Gardenia florida variegata*, the leaves much variegated with yellow; also for a variegated form of *Rhynchospermum jasminoides*. Rose Dr. Lindley from Mr. W. Paul, a shaded dark crimson and very fine, had a first-class certificate. Amy Hogg, a beautiful rosy purple approaching magenta, and others of the late Mr. Beaton's *Geraniums* already noticed at page 4, came from the same gentleman. Scarlet Pelargonium The Clipper and Calceolaria Charmer from Mr. Bull; Verbena Velvet Cushion from Messrs. E. G. Henderson, and Clematis lanuginosa varieties from Mr. Townsend, of which an account was given at the same page, were again exhibited. Scarlet Verbena Earl of Aylesford from Mr. Perkins of Coventry, with a large truss and flowers, had a first-class certificate. Messrs. E. G. Henderson had a like award for *Fuchsia Lucrezia Borgia* with enormous flowers, the sepals reflexed and fine crimson scarlet, the corolla violet and scarlet mixed; Mr. Holland for *Petunia striata perfecta*, a charming rose-and-white-striped variety; and Messrs. Ivery for *Polystichum aculeatum acrocladon*. Beauty of Herts Calceolaria from Mr. Watson, St. Albans, a free-flowering orange and brown sort, appeared likely to be useful for bedding purposes.

FRUIT.

The show of Fruit was excellent, but more limited in extent than one would have expected at this season. Good collections were shown by Mr. Henderson, of Trentham; Mr. Bannerman, gardener to Lord Bagot at Kugeley; and Mr. Lynn, Hedsor, who received prizes in the order in which they are named. Mr. Henderson's, which was far the best, consisted of Queen, Enville, and Smooth-leaved Cayenne Pines; three Melons; Chaptal, Muscat, and Black Hamburg Grapes; Peaches, Nectarines, Cherries, Figs, and Strawberries.

PINES were not numerous. Mr. Bailey, Shardeloes, had two very fine Providences, and the same number of Envilles; Mr. Young, gardener to C. Bailey, Esq., Aberaman, a Providence of 9 lbs. 10 ozs., and Queens of 5 lbs. 4 ozs. and 4 lbs. 4 ozs.; and Mr. A. Henderson an Enville of 7 lbs. The largest Providence, however, was one from Mr. Bailey, weighing 12½ lbs.; another from Mr. Hannan, gardener to

R. T. Crawshaw, Esq., Cyfarthfa Castle, and from a sucker only twenty-one months old, was 7½ lbs. A Prickly Cayenne from Mr. Brown, gardener to Sir C. Knightley, Bart., was 5 lbs.; and of Queens excellent fruit were shown by Mr. Cawkell, Mr. Chitty, Mr. Perkins, and Mr. Godfrey. The prizes awarded were:—For collections, Mr. Bailey first, Mr. Young second, Mr. A. Henderson third; for Providence, Mr. Bailey first, Mr. Hannan second; for Queens, Mr. Cawkell first, Mr. Chitty, Mr. Perkins, and Mr. Godfrey second; for any other variety, Mr. Brown first, Mr. A. Henderson second, Mr. Budd and Mr. Gardiner third.

GRAPES.—In three dishes Mr. Meredith was first with Trentham Black, Victoria Hamburg, and Black Hamburg, very fine; Mr. M. Henderson, Cole Orton Hall, was second with excellent Black Hamburgs and Muscats; and Mr. Embrey third with Canon Hall, Muscat of Alexandria, and Black Hamburg; a similar award being made to Mr. Peachey for Black Hamburg, Golden Hamburg, and Grizzly Frontignan. The next class, for baskets of any kind, was a somewhat unfortunate one, as it involved the comparison of such dissimilar Grapes as Black Hamburgs and Muscats. The latter, shown by Mr. Turner with large berries and in good condition as regards ripeness, carried off the first prize; Black Hamburgs from Mr. Meredith, black as sloes and very fine, taking the second; and the same kind from Mr. M. Henderson had a similar award. Black Hamburgs were almost without exception fine. Mr. Sawkins, gardener to G. Brassey, Esq., Bramfield, was first, Mr. Meredith second; the former being, we understand, the heavier bunches, whilst those from Mr. Meredith were the best coloured. Opinions were much divided as to the respective claim of these two exhibitions to hold the first position. Third prizes were awarded to Messrs. Hyde, M. Henderson, and A. Henderson. Of Black Prince, of course, there was no exhibition to compare with Mr. Hill's magnificent bunches, of which special mention was made last week; an error, however, crept in as regards the weight of the largest three, which should have been 13 lbs. 1 oz., or 9 ozs. less than formerly stated. They were the produce of a Black Prince grafted, we believe, on a Mill Hill Hamburg. Mr. Pottle was second, Mr. Goldsmith third. In Muscats Mr. Turner was first with excellent bunches, Mr. Embrey and Mr. Sage second, and Mr. M. Henderson third. In the Any variety Class, Buckland Sweetwater, shown by Mr. Hill, was first, the three bunches weighing 6 lbs. 3 ozs., and a second lot was 5 lbs. These were much admired. Golden Hamburg, very fine, from Mr. C. Smith, Norwood, was second; and the same kind was also shown very well by Mr. Hyde. Duchess of Buccleuch from Mr. W. Thomson, of Dalkeith, attracted much attention; the three bunches were from a pot Vine, and weighed 3½ lbs. The other varieties exhibited were Grizzly Frontignan, Trebbiano, and Foster's Seedling, many of them unripe.

MELONS.—Golden Perfection, Bromham Hall, Beechwood, Orion, and Hybrid Cashmere were the chief Green-fleshed kinds, and Scarlet Gem the best of the Scarlet-fleshed classes. Mr. Gadd was first in both classes, Mr. Meredith and Mr. A. Henderson taking second prizes.

PEACHES AND NECTARINES comprised fine fruit of Grosse Mignonne, Violette Hâtive, Early Newington, Royal Charlotte, and Noblesse Peaches, and Downton and Elruge Nectarines. First prizes were awarded to Messrs. Rawbone, Sawkins, and Ford; second prizes to Messrs. Hill, Holder, and Miller.

CHERRIES.—Black Tartarian from Mr. Turner, very large and fine, took the first prize in the Black Class; the same kind from Mr. Beck, gardener to Lord Broughton, being second. May Duke was shown by Mr. Meredith, Knight's Early Blay by Messrs. Lane. Mr. Enstone and Mr. Turner were first and second in the White Class, both with Elton.

STRAWBERRIES.—The kinds exhibited chiefly consisted of Admiral Dundas, Oscar, Sir C. Napier, Sir Harry, Empress Eugénie, and British Queen, all of which were fine. Mr. Turner had Sir Joseph Paxton, which has already been noticed in these columns. It is large and of handsome form, less irregular in outline than most large kinds, in colour dark red, and it has a slight Hautbois flavour. It has, moreover, the merit of ripening at the same time as Keens' Seedling. Mr. Bailey had the first prize, the second going to Mr. Lydiard.

MISCELLANEOUS.—Some good Figs, chiefly Brown Turkey, were exhibited by Mr. A. Henderson, Mr. Brown, and Mr. Pottle; Raspberries by Mr. Young, Strawberries in pots by Mr. Turner, Vines in pots bearing fine bunches by Messrs. Lane and Standish, and orchard-house trees by the former and Mr. Fraser, Lea Bridge. The Cocoa-nut from Syon was again exhibited by Mr. Fairbairn, and a cluster of *Musa Cavendishii* by Mr. Carr, gardener to J. Hinds, Esq., Byfleet, whose success in cultivating this Banana was specially alluded to in No. 144.

BIRMINGHAM ROSE SHOW.—JULY 7 AND 8.

THE third annual Exhibition of Roses was held on the above days in the Town Hall, Birmingham. It so happened that the second Exhibition of the Birmingham Botanic Society fell on the 7th; but whether this made any difference as regards the number of visitors I can by no means state positively. The day was fine but not hot—indeed such a day as is most suitable for a flower show, so that visitors could enjoy both the Rose Show in the Town Hall and the other in the Society's gardens. If the two Shows falling on the same day made no difference in the number of visitors, it certainly did in that of plants; for Roses, however they may be prized as flowers, do not fill a large hall without an intermixture of foliage. This was not wanting, but more plants would have been better. The orchestra was nicely decorated with an intermixture of fine-foliaged and flowering plants, which looked exceedingly well, the effect being enhanced by a temporary fountain.

The Roses were very fine, and made a grand display, both in the body of the hall and also in the galleries, the whole being differently arranged from last year, so as to allow more room for the visitors. Altogether the arrangement was very good, both in the disposal of the blooms and plants, and in that of the various gardening implements, &c., exhibited.

Though I believe the Roses were as numerous as last year, or nearly so, I missed several of the larger exhibitors, and some of the smaller ones also. The Show was, however, a very good one, and there can be no question as to its success. The following is a list of the prizes awarded:—

No. 1. Ninety-six varieties, three trusses.—First, Messrs. Paul & Son, Cheshunt. This collection contained some of the very finest blooms, and was exceedingly fresh, although, probably, too fully blown for a two-days show. I noted the names of some of the best, but I do not think it would interest the generality of readers to give them. Mr. J. Keynes, of Salisbury, was second, his collection very closely following that of Messrs. Paul & Son. The flowers were mostly very brilliant in colour, and sustained the character of the grower.

No. 2. Forty-eight varieties, three trusses of each.—First in this class was Mr. B. R. Cant, of Colchester, with a most splendid collection, the blooms being full and generally well formed, besides being very brilliant, although placed within the shade of the front gallery. Second in this class came Messrs. Paul & Son, and third Mr. Keynes, both with very good collections.

No. 3. Twenty-four varieties, three trusses of each.—First, Mr. Cant; second, Mr. Keynes; third, Mr. Batley, of Rugby; fourth, Mr. Davies, of Newbury.

No. 4. Twenty-four varieties, single trusses.—First, Mr. Treen, Rugby; second, Mr. Batley; third, Mr. Vertigans, of Edgbaston.

No. 5. Twelve varieties, three trusses.—First, Mr. Treen; second, Mr. Batley; third, Mr. Vertigans.

No. 6 (Amateurs). Forty-eight varieties, single trusses.—First, Mr. S. Evans, Arbury; second, Mr. J. Perry, Castle Bromwich.

No. 7. Twenty-four varieties, single trusses. First, Mr. E. Stuart, Leicester; second, Mr. Evans; equal third, Mr. Sage, Atherstone, and Mr. Perry. No. 8. Eighteen varieties, single trusses. First, Mr. S. Evans; second, Mr. Brown, Elmdon Hall; third, Mr. Hunt; fourth, Mr. Garnet, Moor Hall. No. 9. Twelve varieties, single trusses. First, Mr. Sage; second, Mr. Stuart; third, Mr. C. E. West, Sutherland. No. 10. Twenty-four varieties, single trusses. First, Mr. W. Brown; second, Mr. Perry; equal third, Mr. Garnet and Mr. Smythe, Solihull. No. 11. Twelve varieties, single trusses. First, Mr. W. Brown; second, Mr. Wright, Perry Bar; third, Mr. Smythe; fourth, Mr. J. Perry.

No. 12. Six varieties, single trusses.—In this class the exhibitors are limited to such as grow their Roses within three miles of what is considered the centre of smoky Birmingham. Last year there was not one entry, but this season there were several, and the trusses exhibited were no discredit to the growers. The first prize was awarded to Mr. H. Lowe, Edgbaston; the second to Mr. E. Sansome; the third to Mr. Wragge, Edgbaston; and the fourth to Mr. E. Sturge.

In No. 13, New Roses of 1862, 1863, or 1864, twenty-four blooms, Mr. J. Keynes was first. His collection contained splendid blooms of John Hopper and Baron Rothschild. The second prize went to Mr. B. Cant for a very nice collection. The third to Messrs. Paul & Son, whose collection contained very fine blooms of Paul Delameillera, Jean Goujon, Madame Soupert, and Professor Koch. The fourth prize was awarded to Mr. Batley, who had Clement Marot, very good.

In No. 14, the best New Rose of 1862, 1863, and 1864, Mr. Keynes was first with Madame Charles Wood, and second with Charles Lefebvre; Mr. Cant second with John Hopper; Messrs. Paul & Son fourth with Lord Clyde and Maréchal Vaillant.

No. 15. Best Design, Basket, or Vase of Roses and Rose Foliage.—First, Mr. Vertigans; second, Mr. Evans, Arbury; third, Mr. J. Cole, Birchfield. No. 16, Best Design for Dinner Table Decoration, Flowers to be Roses with other Foliage.—First, Mr. Vertigans; second, Mr. Brewer, Islington, Birmingham; third, Mr. J. Cole. No. 17, Best Bouquet of Roses and Rose Foliage.—First, Mr. Vertigans; second, Mr. Cole; third, Mr. Treen; fourth, Mrs. Sandford, Chesham.

The above are all the prizes; but there were contributions in the way of plants and flowers, particularly a stand of Verbenas from Mr. J. C. Perry. There were also stands of Roses which were not for competition; one row of boxes from Mr. J. Cranston, containing several hundred blooms, and most of them very fine.—F. CHITTY.

NEW FRUITS.

THIS morning I have had the pleasure of sending you another small case containing two varieties of Cherries and six of Currants. The Cherry No. 64 is Montmorency à longue queue (cultivated among us under the name of Cerise Orange*), and the other is De Jonghe's Transparent. The latter was raised from seed in 1844, and produced fruit for the first time in 1852 or 1853. The tree is of very moderate growth and great fertility, a point which one feels the disadvantage of when strong shoots are required to supply buds for budding. Since 1854 I have tried it in every way, and I have found in the last experiments that the variety succeeds best grafted as a half standard or full standard on the Red Gean. It is less at home on the Black Gean, and much more still on the Mahaleb. Planted *en cordon oblique* against a wall or espalier, leaving the stem to develop itself at leisure, but taking care to pinch the laterals, there will be, in the second year, all along the stem, fruit double the size of the specimens I send in the case. As you see it the fruit is of very good quality.

When the tree first bore fruit, after having examined and tasted it, I gave it the name of "Transparent," and, to distinguish it from other varieties bearing this name, I added my own as raiser of the variety. This denomination is in conformity with the system of Baron Truchsess, now generally admitted in the science of pomology. It is also under this name that I have furnished many plants of it to Mr. Thomas Rivers, and you have described it† from fruit received from that gentleman, without at all indicating its origin.—J. DE JONGHE, Brussels, July 6th.

[DE JONGHE'S TRANSPARENT CHERRY.—We cannot speak too highly of this delicious Cherry, which in size equals the May Duke; the skin is thin and transparent, showing the texture of the flesh through it, and is of a pale red colour. It is sweet and richly flavoured.

RED CURRANTS.—No. 5 is an abundant bearer, and pro-

* This is a very distinct Cherry from our Kentish, with which it is made synonymous in the Horticultural Society's Catalogue.

† JOURNAL OF HORTICULTURE, Vol. IV., page 44.

gives good-sized bunches, bearing from fourteen to eighteen berries on each. The colour is of a fine brilliant red, and the flavour much less acid than that of the Red Dutch Currant grown in this country. No. 6. In this we do not distinguish anything different from the Red Dutch, and it is inferior to the Long-bunched Red. No. 7 produces shorter bunches than either of the above, and is possessed of a mild acidity. It is not, however, an improvement on existing varieties, except in that respect, for it is much less acid than even Knight's Sweet Red. No. 8 is too much like Red Dutch in every respect.

WHITE CURRANTS.—No. 35 appears to be a very late variety, comparing it with the fruit of the following, which is dead ripe while the former is quite hard and green. No. 38 appears to be a great bearer, but in the bunches and berries it is not superior to existing varieties.]

THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.

THE Anniversary Meeting of this excellent Society was held on Friday, July the 8th. The Right Hon. Charles Lawson, the Lord Provost of Edinburgh, presided, supported by E. Wrench, Esq., J. A. Henderson, Esq., J. Lee, Esq., J. Veitch, Esq., Messrs. Addiscott, Barnes, J. Bolton, J. Bruce, J. Cutbush, &c.

THE LORD PROVOST said—I beg now to propose the health of "Her Most Gracious Majesty the Queen." Although I have never had the honour to propose this toast in London, I feel assured that it will be greeted with the same hearty loyal reception which it never fails to call forth in the north, and everywhere throughout the British dominions. We are a loyal people, and will always respect and pay homage to our Sovereign. But Queen Victoria possesses, and deserves to possess, more than mere homage and respect. She has gained the love and confidence of her people; and well she may, for her whole life has been adorned by the unaffected display of virtues, never more brilliant than when they grace the exalted and illustrious position which Her Majesty occupies. The Queen has earned a great and a good name in history, and I trust she may be long spared to us.

THE LORD PROVOST said—Our next toast is to "The health of their Royal Highnesses the Prince and Princess of Wales, and the other members of the Royal Family." From what little I have had the honour of seeing of the Royal Family, and from a great deal I have heard, there are few families owe more to the care and anxiety which their parents have bestowed upon their early training, and few parents have ever had more teachable, well-disposed, and noble-minded children. I believe there is but one feeling in the country regarding the Royal Family, and that is, that the Prince of Wales, his fair Princess, and every individual member of that illustrious circle, are conducting themselves with a propriety and a grace which reflects the highest honour upon themselves, and, I may almost say, if possible adds to the brilliancy of that lustre which their Royal parent has shed over the British Court [loud cheers].

THE LORD PROVOST—I have now the honour to propose the health of those services which have for centuries guarded the freedom and the honour of our flag. If ever there was a time when we should desire to see our Navy and our Army in good discipline and ready for work, in my opinion we should desire to see that now. For some time past those clouds which have been gathering round the political horizon of Europe have been creeping on towards us, and darkening as they crept. Whatever may be the result of the excited state of feeling abroad, it is impossible to say; but, come what may, our soldiers and sailors are as brave and daring as they ever were; and if circumstances compel us to assert the dignity and authority of the British flag, woe betide the foe that may have the temerity to question our doings. I am glad to know that our Volunteers are still keeping up their numbers, and are still maintaining their efficiency in drill and rifle exercise. They may yet be called upon to guard our shores, and I know they will do it well. I beg to propose the health of those services [tremendous cheering].

THE LORD PROVOST—I have now the honour to propose what on the present occasion must be regarded as the most

important toast of the evening: "Success and Prosperity to the Gardeners' Royal Benevolent Institution." It is, perhaps, one of the finest features of this country, that private generosity and the kind feeling of the prosperous perform those obligations which the fortunate owe to the unfortunate, which in some countries are discharged by the Government, and in others left undischarged altogether. Now, in Great Britain the number of benevolent institutions is most amazing, and they form in my humble opinion no unworthy monument in honour of the public sense, of duty which beats nowhere stronger than in a British heart. Amid all the benevolent institutions in the country, I do think it is but fair that one should be devoted to gardeners, for I do not know that a more deserving, a more hardworking, or a more useful class of men exist than they; and more than this, their profession is peculiarly calculated to excite our sympathy for them in the days of their adversity. We have undoubted testimony that the gardener's is the most ancient profession of all; and it has often occurred to me that the employment of gardening is the most innocent, and productive of the most happiness and pleasure. In a perfect state of things one can almost imagine all kinds of professions being done away; indeed, things would be anything but perfect if certain learned professions continued to exist; but the tending to all the beauties of the floral creation and the caring for the rich variety of fruits with which Providence has so bountifully endowed this earth, honestly appears to me to be compatible with an existence as perfect as we can imagine it to be. In that perfect state of things gardening would be a pastime, and gardeners, probably, something like angels; but at present they are only hardworking men, and they have to go through much toil to support wives and children, and unhappily it not unfrequently happens, that in old age the poor man who has been the means of administering so much comfort to his fellow creatures, who has, no doubt, again and again adorned our tables with flowers, and served us with the choicest fruits; who, in fact, has done his little to help in restoring the earth to its pristine beauty from which it has so lamentably fallen,—I say it often happens that this quiet, hardworking administrator to our joy and comfort, is overtaken by the hand of misfortune, his age embittered by sickness, and nothing to look to but the kindness of those who are unwilling to see an honest, good man go without a helping hand when he needs one. Happily this Institution exists, and we now celebrate its 21st anniversary. I am sure the history of the Institution is well known to most of those friends I see around me; but as some strangers have honoured us with their company, I think I may be forgiven if I say a few words as to its progress:—During the early years of the Institution little or no good was effected, but in 1843 some beneficial changes in the management were introduced; it received the Royal patronage in 1851, and has gradually progressed in usefulness, affording annuities to deserving applicants above sixty years of age; of £16 and £12 to men and widows respectively; giving always a preference to subscribers, which has been found to encourage habits of prudence and economy through life. At this moment there are fifty-five persons preserved from the evils of poverty and sickness by this Institution. It is entirely supported by annual subscriptions, collection at the anniversary dinner, and the dividends on £5500 funded stock. My friends Mr. Wrench and Mr. Cutler kindly consent to continue their services as Treasurer and Secretary; and of the twenty-four members forming the Committee of Management, one-third of that number are always practical gardeners. Now, I hope no one will esteem it a fault on my part when I say, if all the well-to-do gardeners were to come honourably forward and subscribe their mite towards an institution eminently their own, they would only be doing by their less fortunate brethren what reason, ordinary kindness, and duty should prompt them to do. I hope that all our landed gentry will consent to become subscribers to this Society—every one should, indeed, who enjoys the luxury of flowers, fruit, and vegetables. The ladies, especially, ought to think of the poor gardeners, whose hands have reared the flowers which give them so much pleasure, and enhance so beautifully their charms; but with the gardeners it is a positive obligation, and I trust that ere long such will be the success of the Gardener's Royal Benevolent Institution, that not a single gardener or gardener's widow in the

country, who may be in true misfortune, may have to ask twice, or ask in vain, for its sheltering protection.

The Lord Provost said—The next toast which I have the pleasure to propose, is one to which I am not sure whether I should allude in its official or private capacity. I beg leave to propose "The Health of the excellent Treasurer of this Institution, an esteemed friend of my own, Mr. Wrench." In the particular branch of commerce in which I and many around me have been engaged, it is well known that Mr. Wrench's name is a kind of household word; and I am sure I only say with truth, that both his own name, and the name of his father before him, are held in an estimation which reflects the very highest credit upon the firm and upon every individual member of the family which raised, by their talent, industry, and high sense of honour, that firm so high in public opinion. It is most creditable to Mr. Wrench to find him, while even yet immersed in the anxieties of business, holding a responsible office in this benevolent Institution; and I well know that he holds it with great credit to himself, and that he has spared no effort to bring his services to bear successfully on the prosperity of the Institution. I know that for the success of the Gardeners' Benevolent Institution we must also look to others than the Treasurer; but I always think it good to have a lucky Treasurer, and, as I cannot but regard Mr. Wrench as a lucky man this evening, surrounded as he is by so many munificent benefactors to the Institution, I congratulate the Institution in possessing so fortunate an omen of its future prosperity.

The Lord Provost's health was next drunk most enthusiastically, when in returning thanks he said:—I am quite at a loss how to thank you adequately for the very kind manner in which my health has been proposed, and the more than kind manner in which it has been received. I assure you when I was asked to preside at the dinner I felt myself much complimented, for I knew how many more distinguished persons and more deserving might have been chosen for such an honour; still, from a feeling of pride I suppose, I could not refuse the compliment, and I have now had the intense satisfaction of presiding at an English dinner in your own English metropolis. Permit me before I sit down to say a word in praise of what I consider a noble feature in the English character—it is free from all prejudice, and in this forms a brilliant example to your neighbouring fellow countrymen north of the Tweed and across the Channel. In this great city you invite all and sundry—Scotch, Irish, foreign—no matter where they come from they are all welcome, and welcome to do as they choose. I call this a grand national characteristic, and to it London is in no small measure indebted for the proud position she holds among the nations of the world, even England herself, indeed, for her greatness; and, to compare great things with small, I am indebted for appearing here this evening. I shall long remember the agreeable entertainment we have just had, and again thank you most warmly for your kindness to me.

The health of the Ladies, who mustered strongly in the gallery, was next given.

The musical arrangements were admirably carried out by Miss Poole, Mr. W. H. Cummings, Mr. Montem Smith, and Mr. Lewis Thomas. Mr. W. H. Thomas acted efficiently at the grand pianoforte; and our old friend Harker as usual made an able toastmaster. The dinner was of a most *récherché* character, and gave great satisfaction.

SKELETONISING LEAVES.

SOAK the leaves in soft water until the green parts are perfectly decomposed. Pour off this water and fill the basin with fresh water. The basin must be large enough to hold the hand comfortably. Put the hand into the basin, and, holding the leaf under the water, gently manipulate it between the fingers and thumb (using only the tips of the fingers), until every particle of green comes away. If it does not do so easily, the leaf requires more soaking. Fingers have a far more delicate touch than any brush. A piece of white blotting paper raises the leaf out of the water better than writing paper. Pass the leaf once or twice through a solution of chloride of lime, half a teaspoonful of the powder

to a pint of water. Dry them gradually between folds of blotting paper not too much pressed, and remove them either to mount or to preserve in any manner you please before they are quite dry.

MUSCAT GRAPES.

As the interesting and instructive remarks on "Choice of Grapes" by Mr. Pearson (page 454), were offered partly for the purpose of eliciting the opinion of others, I am induced to offer a few remarks on the choice of Muscat Grapes.

When Mr. Pearson says that it signifies very little which variety of Muscat, excepting the Canon Hall, is planted, I have no doubt he speaks from his own experience; and there is no doubt that under skilful management and favourable circumstances he is, to a certain extent, correct. There are, however, varieties of the Muscat which are not attended, under ordinary circumstances, with that precariousness in setting which belongs to what is generally known as the old Muscat of Alexandria, and which results in the many samples of that Grape which are to be met with having irregularly set or stoned berries, and which greatly disfigure the bunches. First-class management can and does overcome this objectionable tendency in the old Muscat; but there are many instances in the present day in which Muscats are planted and fruited at the hot end of comparatively cool vineries, and under other circumstances not favourable to complete success in setting and maturing the berries.

Under such circumstances I think the selection of varieties of the very greatest moment, because I have found that there are one or two varieties of Muscat, every berry of which sets and ripens in a temperature where the same success does not attend the old Muscat, and which are in size of berry and flavour, more particularly in the former point, more than equal to any of the Muscat section.

The varieties I allude to are the Tynningham and Bowood Muscats, both of which set as freely, and can be thinned as freely, as the Black Hamburgh in a temperature lower than is necessary to secure the same result with the old Muscat. Moreover, both these varieties, with me at least, make finer berries than the old Muscat, while they ripen sooner, and are easier brought to that amber pitch characteristic of first-class Muscats. They can be shut up for forcing the first week of February, and placed ripe on the table in the last week of June.

I think these are points well worthy of the attention of those who grow Muscats in a mixed collection, or who have not the command of a high temperature. The two sorts I recommend I am certain will give more satisfaction in setting and ripening in a moderate temperature than the old Muscat.

What Mr. Pearson says about their general appearance when ripe and placed on the table may be, to a certain extent, correct. But I have for some time grown the three sorts to which I refer, and I would never think of planting the old Muscat while I could obtain the other two.

Some time ago an effort was made to prove the Tynningham and Bowood varieties identical, but some who entertained that opinion think differently now; and they are, with me, more distinct in wood, foliage, and general character, than are some of the Black Hamburgh varieties of Grapes, which are, nevertheless, varieties.—D. T.

MR. TOWNSEND'S SEEDLING CLEMATISES.

My attention has been directed to the concluding paragraph of the proceedings of the Floral Committee of the Royal Horticultural Society of June 29th, as reported in the last Number of your Journal. The insinuation contained in this paragraph is calculated to seriously damage my character as a florist, and, therefore, I beg to be allowed to occupy a small space to furnish the gentlemen composing the Floral Committee (and of whose names I am entirely ignorant), with some information respecting the seedling Clematises submitted by me for their judgment.

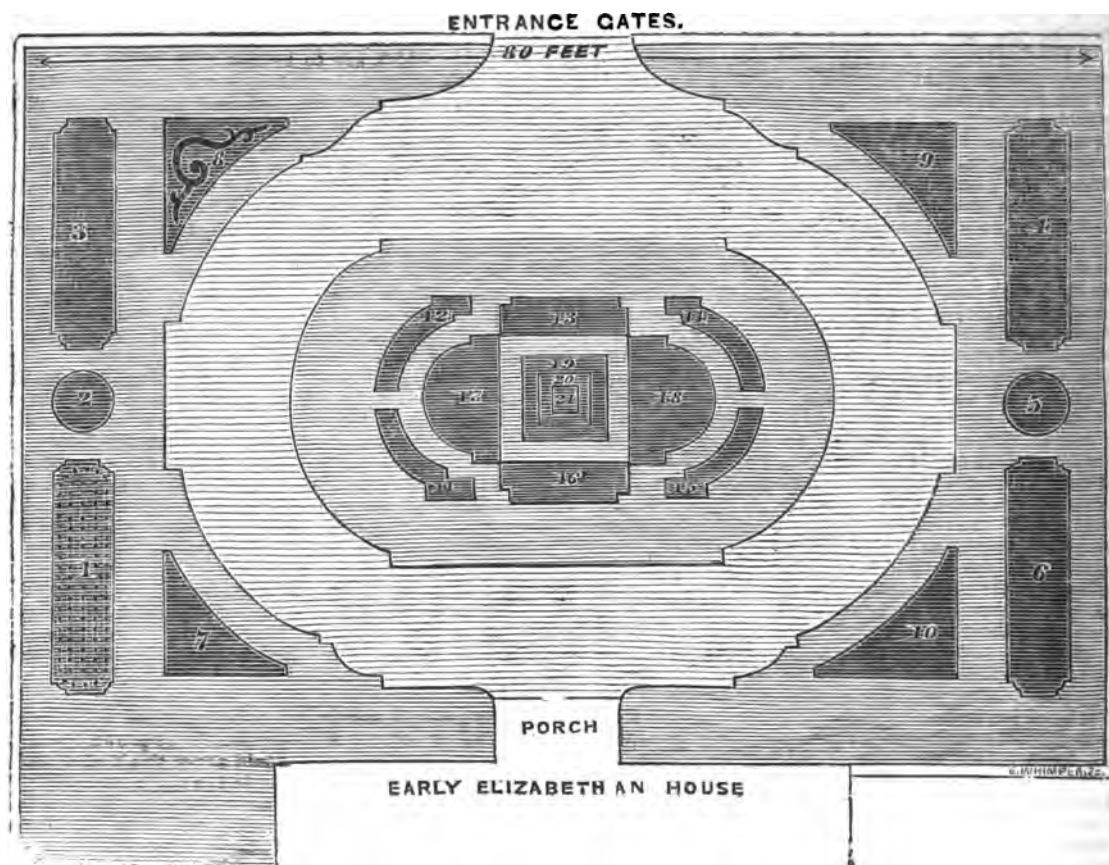
The seed from which these Clematises were raised was hybridised and gathered by me. I came to St. Mary's Nursery, Hornsey, at Christmas, 1862, immediately after which the seed was sown. The plants exhibited were the

produce of that seed, and have never been out of my possession. Some of them bloomed last year, and one of the plants exhibited is a plant of this year's growth, and bloomed for the first time this summer. I still have of this year's growth more than twenty plants from the same seed, none of which have yet bloomed, but are now showing bloom, which I shall be happy to show to any person who may favour me with a call, and answer any questions concerning them.

None of these Clematises have ever been shown till they were exhibited at the Alexandra Park Flower Show, June 22nd; they were there awarded first-class certificates of merit. They were then submitted to the judgment of the gentlemen composing the Floral Committee of the Royal Horticultural Society, June 29th. Since then they have

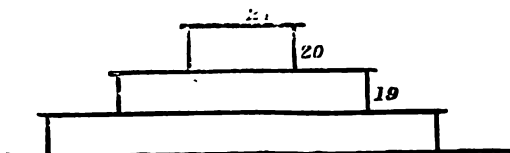
been exhibited at the Royal Botanic Society's Flower Show, Regent's Park, when they were also awarded certificates of merit. These were the only times the plants have ever been exhibited. I feel assured the gentlemen of the Floral Committee would not willingly injure my reputation as a florist by unjustly doubting my integrity; and as they appear to have withheld their commendation of these Clematises from some doubt as to their origin, I trust this explanation will be satisfactory to them, and that they will do me the justice to award me any certificates they may think these plants merit; or should they desire it, I am willing again to submit them for their opinion at any future meeting of the Committee.—THOMAS TOWNSEND.

FLOWER GARDEN PLAN.



- | | | | |
|---|--|---|--|
| 1. Centre Golden Chain Geranium, surrounded with Bijou, and edged with Lobelia. | 8. Christine Geranium, Nierembergia, Variegated Alyssum. | 12. 15. Lady Plymouth, dotted with Lobelia. | 19. Tropæolum elegans, edged with Lobelia, and Lady Plymouth Geranium planted alternately. |
| 2. Henri de ———, Nierembergia, Variegated Arabis. | 6. Cerise Unique Geranium, Lady Plymouth, Lobelia. | 13. 16. Cloth of Gold Geranium, edged on outside only with Perilla. | 20. Christine Geranium, edged with Nierembergia. |
| 3. Boule de Nègre, Spitzfée, Lobelia. | (2, 3, 4, 5, 6, planted as No. 1.) | 17. 18. Cerise Unique Geranium; Calceolaria Aurea floribunda, edged on outside only with Perilla nankinensis. | 21. Perilla nankinensis, edged with Variegated Alyssum. |
| 4. Bijou Geranium, Golden Chain, Lobelia. | 7, 8, 9, 10. Cerastium with pattern as shown in Perilla. | | |
| | 11, 14. Lady Plymouth Geranium, dotted with Brilliant. | | |

The garden is surrounded by a wall as shown. The gravel path is wide, as it is used as a drive up to the house. The



centre beds 19, 20, and 21 are raised one above the other,

as in the accompanying woodcut. The sides are of slate painted like stone. No. 6 bed would have been planted as No. 3, simply reversing the position of Boule de Nègre and Spitzfée, but I had not a sufficiency of these Geraniums.—A SUFFOLK SUBSCRIBER.

[We think your garden will look very well as proposed if you give it the necessary pruning and regulating, especially as respects the Perilla outside of the beds. We think, however, that you have too much Perilla; and a line all round the figures 13, 16, 17, 18 will give a sombre appearance, especially being next the grass. Charwoodii and Purple King Verbena would suit better. The Perilla will

want so much regulating outside Cloth of Gold and Aurea floribunda Calceolaria, that if you must use Perilla we would put it in the middle—thus: 13, 16, Perilla, Cloth of Gold; 17, 18, Cerise Unique Geranium (strong plants), Perilla, Aurea floribunda. In 21 we would put Scarlet Geranium instead of the Perilla; 19 and 20 as stated. Then as you cross 11, 14, and 12, 15, which will do well, and all the better from the above proposed alteration, we would take that crossing as the guide for the other planting; and we would thus make pairs of 1 and 4, 3 and 6, 7 and 9, 8 and 10: the last two might have *Amaranthus melancholicus* instead of Perilla. By your proposed mode all your edgings of the corner beds would be Perilla, all the outside ones Lobelia. By the proposed plan the inner would be yellow, the outer blue. Even blue is tame against grass. Give rich top-dressing to the Verbenas, and rotten leaf mould to the Calceolarias, firming the soil well.]

THE WANT OF VARIETY AMONG TREES AND SHRUBS IN PLEASURE GROUNDS

AND ORNAMENTAL PLANTATIONS.

WHEN we consider the great taste for ornamental gardening at the present time, the numerous fine hardy trees and shrubs which are capable of enduring our climate, and the moderate price at which they can be obtained, it is rather strange that the shrubberies and ornamental plantations in very many places of note are still mostly composed of the oldest and commonest kinds of trees and shrubs; which, with few exceptions, have occupied similar places in our gardens since the days of Philip Miller and Abercrombie. The great lack, however, of variety at the present time in most pleasure grounds and ornamental plantations is perhaps more owing to the generality of planters not knowing the different species and varieties of hardy trees and shrubs that we now possess, and the kinds which are best suited for the purpose.

One of the principal reasons for planting different kinds of trees and shrubs in a plantation or pleasure ground is to create as much variety as possible in the scenery, by the display of the natural character and outline of the heads of the larger trees at a distance, and the smaller trees and shrubs near at hand; for the object of variety is not like that of mixture, to puzzle and confound the spectator, but to charm and delight by leading the eye a sort of wanton chase, as Uvedale Price has expressed it, "from one beauty to another; alike, but yet different;—presenting in the detail novelty at every movement, and all parts conspiring to form a beautiful and harmonious whole." Therefore, when trees and shrubs are planted for ornamental purposes in or around the pleasure ground, or near the mansion, they should in all cases present as much variety as possible, so as to make these spots attractive and interesting, more especially as the trees and shrubs planted in such places are for the most part permanent and confined to belts or clumps placed in prominent parts, for the purpose of forming screens, or planted singly for varying the general aspect of the place, or separating one part of the grounds from another.

Mr. Loudon says, "The first step towards a knowledge and taste for variety is to be able to distinguish variety from mixture," and "that a knowledge of what variety is would lead to an effectual desire to possess it." Now, if, as Mr. Loudon so justly observes, such a desire were applied to the planting of the various hardy trees and shrubs which we now possess, what an amazing increase it would produce in the arborescent riches of country seats as compared with what they now are; besides, it would lead to the employment of ten times the number of species and varieties of hardy trees and shrubs that is at present grown, and so displace the present meagre, monotonous, thick-set mixtures that ladies and gentlemen are now content with in most parts of the country. Again, if all the species and varieties of trees and shrubs which bear the open air in this country, and which have any pretence to ornament or distinction, were planted at gentlemen's country seats, what an interest would such places then excite as compared to what they do at present; and all that seems wanting to produce this interest, enjoyment, and commerce is a more

general knowledge of all the hardy trees and shrubs, their habits, and the sizes which they attain, on the part of those who are entrusted with their selection and planting, and a little more taste, ambition, and a desire to have them properly named by their employers; for when a large variety of trees and shrubs are properly arranged and named they form a fine contrast, and add greatly to the interest of the place.

The number of hardy trees and shrubs which we now possess is large and admits of very great choice in the formation of ornamental plantations, where variety always adds both to the attraction and beauty of the place; for every tree and shrub has its peculiar character. The Lombardy Poplar, for instance, has unity of design and an unsocial habit, which forbids the mingling of its branches with those of other trees; while the Weeping Ash disobeys the ordinary law of vegetation, and grows downwards. Every tree and shrub, likewise, has its two characters, both of which are natural to it, the one when it grows up in a mass or among others, and the other when it grows singly, with ample room for the extension and development of all its parts. In the former case the stem or stems are mostly straight, and comparatively free from branches near the ground, while in the other the tree extends its branches amply on all sides, and retains them down to the ground. It is, therefore, obvious that plenty of room and pruning are of the greatest importance in the management of ornamental plantations and shrubberies, and quite as requisite as in timber plantations.

In plantations where large and small kinds are intermixed, and especially flowering ones, the chief object should always be to show the individual character of each species or variety and the beauty of its blossoms, and for these purposes the plants must never be crowded together. Nearly all trees and shrubs are planted as permanent objects, which increase both in size and beauty every year, and when a large assortment of them is introduced and properly arranged in the pleasure ground or ornamental plantation, a succession of changes, not only of foliage and flowers but in the general aspect, takes place nearly all the year round; for a perceptible change is constantly going on in the plants, caused by their perpetual progress, not only to maturity, but to dormancy. Such changes are exhibited by the various tints of the young expanding leaves in the spring and the maturer shades of summer, by the various hues assumed by the dying foliage of deciduous kinds in autumn, and by their leafless spray in winter. Every species of tree and shrub has its peculiar habit of growth, tint of colour, and outline, and, consequently, requires sufficient space for the full development of its characteristics, and if these are not carefully considered at the time of planting an evil is created that frequently is not noticed afterwards until it becomes too late, and the result is either the mutilation or sacrifice of some of the finer specimens, which, if due consideration had been exercised at first, would have been avoided. Nothing can be worse than to see in a pleasure ground two or three nearly full-grown trees of different species and habits with their heads and branches mutilated or interwoven, and destroying the outlines of each other.—GEORGE GORDON, A.L.S.

NEW STRAWBERRIES.

It is a rule with me, from which I seldom depart, to speak only of good Roses and Strawberries, and say nothing of those which are bad or unsuitable to my locality, especially if they have been kindly sent by the raiser. Moreover, an article may be good elsewhere that is not good here.

These are very good; and judging them under unfavourable circumstances, they may be safely recommended.

1. THE ROYAL HAUTOIS (Rivers), is an immense cropper, and the fruit is very large and delicious. The plant is a hardy hermaphrodite.

2. LUCAS (De Jonghe), derived from La Constante, is excellent, hardier, and a better grower. I do not think, as some do, that it is superior to La Constante, but it is excellent, and is a heavy cropper. The fruit is nearly round, and handsome. It is more suitable to different soils and localities. The plant does not burn under a torrid sun, as I have seen La Constante do. It is also a better winterer.

3. **BENNETT'S SEEDLING No. 1** (called, I believe, *La Vinasse*), a latish Strawberry, is excellent, as a plant a heavy cropper, with round fruit of good flavour, with a slight bristleness. It is very hardy and quickly established—a point of great moment in this precarious climate. I speak of these three Strawberries after their second year's trial.

4. **BIZOU (De Jonghe)**, is a pretty dwarf-habited plant, slow in growth, but healthy and tolerably hardy. The fruit is of regular and perfect shape, round-coned; but alas! from my only three plants the innumerable birds have pulled off the net, and saved me the trouble of tasting.

5. **JOHN POWELL (Ingram)**, is Queen-leaved and Queen-flavoured. The plants came late last autumn, I could not therefore expect a crop. I have tasted sufficient berries to say it is first-rate. The fruit is irregular, round-coned, and handsome. The flesh is solid to the centre and firm. It is juicy and pine-flavoured. I fancy it will be one of the very best new sorts, and remain in the catalogue. I have taken off all the remaining fruit in order to "make plant," as the plants had a severe winter in their unestablished state. The Frogmore Pines (in huge crop and size here), and John Powell do Mr. Ingram the greatest credit. The former is one of the greatest leaps in the Strawberry line.

6. **LORD CLYDE (Dean)**, is strong as a plant and quickly established. I received it late this spring in the midst of hoar frosts. It is a first-class Strawberry. I saved sufficient fruit from my two plants to speak of it highly. It is of fine flavour, and also the most honey-sweet Strawberry that I ever ate. I think it will be a cropper. The berries are not uniform. They are round, cockscumbed, or double-breasted. They are not so firm as John Powell, but I fancy they are equal to it in flavour. These three are in their first year of trial. The last two have well pleased me.

Here, then, are five novelties, a pentateuch of excellence, that stand out in bold relief from an annual inundation of trash.—**W. F. RADCLIFFE, Buxton.**

ENTOMOLOGICAL SOCIETY'S MEETING.

THE June meeting of this Society was presided over by A. T. Stainton, Esq., F.L.S., in the absence of the President. Amongst the donations to the Library received since the last meeting were the publications of the Zoological and Botanical Society of Vienna, the Royal Agricultural Society, the Entomological Society of New South Wales, &c.; also a new work by M. Simon on the Spiders, and an elaborate monograph on the Bee Flies (Estridae), by Herr Brauer of Vienna.

Mr. Morris exhibited some leaves of the Sugar Cane received from the island of Mauritius, where the canes are infested to an alarming degree by a species of *Coccus* closely resembling the common Vine Coccus, and which was supposed to have been introduced from Belgium or France. The young leaves of the canes both in Mauritius, and the island of Réunion are especially infested to a great degree by the insect. Sulphur had been applied to a certain extent, but it was very difficult of application. Carbolic acid had also been strongly recommended to be used as a wash in a diluted form. It was in dry weather especially, when the leaves are succulent, that the pest is the most troublesome.

Mr. F. Smith exhibited, on behalf of Mr. Atkinson of Calcutta, a number of drawings of the Lepidopterous insects of India, executed by native artists with a delicacy of touch and precision of colouring quite marvellous. Many very rare and interesting species were thus represented, especially some singular varieties of the extraordinary *Epicopeia polydora* and *Calinaga Buddha*. He also exhibited a Humble Bee (*Bombus* sp.), captured by his son on Deal sands, which was evidently distinct from any previously-described British species; also, on behalf of Mr. S. Stone, a series of six nests built by a colony of *Vespa germanica* in cubical boxes glazed in front, and exhibiting a variety of most fantastic forms, one resembling a large cup on a pedestal, another the columns of a stalactite cavern, and one was a fair miniature representation of Stonehenge. Professor Westwood suggested that Mr. Stone had induced the Wasps to build their nests in these curious shapes by introducing small pieces of wire in different positions, of which the wasps took advantage as affording support to their combs.

Some notes were also read on the destruction of queen Wasps in the spring of various years, proving how greatly the development of these insects is affected by the varieties of climate. In cold springs scarcely any wasps could be seen, but in dry and warm ones vast numbers were found; thus, in 1841 as many as 586 dozen of queen wasps were caught and destroyed.

Mr. F. Smith objected to this wholesale destruction of Wasps (each queen, of course, representing an entire future colony), considering that Wasps were rather beneficial in the economy of nature than otherwise.

Mr. McLachlan exhibited a Case-bearing caterpillar found on Thyme at Box Hill, differing from any hitherto observed Lepidopterous Case-bearer. The specimen in question was, however, stated by Professor Westwood to be the larva of the Coleopterous genus *Clythra*.

Professor Westwood also exhibited a number of minute four-footed Acari, which had been communicated to him by Mr. Chapman of Glasgow, and which had proved very destructive during the present spring to the buds of the common Black Currant, within which they were found in vast numbers, and of which they destroyed the embryo bloom. He also exhibited and read the description of a new and remarkable Butterfly from Assam and Singapore, forming the type of a new genus, to which he gave the name of *Liphyra Brassolis*; the Butterfly, although belonging to the family *Lycanidae*, exhibiting a great resemblance to the robust body *Brassolis* of South America.

Mr. Bates read a communication from Mr. Trimen of Cape Town, giving an account of an interesting instance of mimetic resemblance traced to its object in the instance of a species of Spider which resides on the *Senecio pubigerus*, Linn., and which so exactly resembles the flowers of that species of Ragwort in its colours and markings as to deceive the small species of Butterflies, which it captures and devours when they fly down to settle upon the supposed blossom.

Major Parry exhibited a curious case of monstrosity occurring on an exotic species of Stag Beetle, *Odontolabis Stevensii*, the antennae of which were divided into three branches.

Mr. Stainton exhibited the curious pupa of a small Moth, *Anchia verrucella*, which closely resembles that of the Butterflies of the genus *Pieris*, being attached by threads at the tail and girt round the body.

Mr. Tegetmeier made some observations on the economy of Hive Bees, especially with reference to their habit of clearing out and taking possession of old combs, which they have the instinct to fasten with fresh wax at the top, and also on their feeding upon pollen.

Dr. A. Wallace gave an account of the successful rearing and winding-off of the silk of the Bombyx *Cynthia*, which feeds on the *Ajanthus*, at Colchester. Specimens of the silk as carded from the cocoons, spun silk, and woven silk were all shown, together with a skein of silanthine spun from the cocoon in a continuous thread, which had until quite recently been considered impracticable.

Mr. F. Walker communicated a memoir containing descriptions of new species of Chalcidites, of the genus *Smiera*, brought from the Amazons by Mr. Bates, and now in the British Museum.

WORK FOR THE WEEK.

KITCHEN GARDEN.

PERSEVERE in the all-important operation of stirring the surface of the soil at every favourable opportunity. There is no kind of soil which will not be benefited by this operation, but more particularly for those having a tendency to run together or bind it is indispensably necessary. No one who has not followed out the system perseveringly can truly estimate the great advantages resulting therefrom. It is very proper to apply stimulants in the shape of manure trenched in and incorporated with the staple soil, or in a liquid state during the growing season; but the benefit of such applications is greatly increased by continued, and, as far as possible, deep surface-stirring; for it is the atmospheric agents acting upon and combining with the substances composing the food of plants, which reduce them to a fit state to be taken up through the roots and assimilated.

lated by the plants. *Cabbage*, make another sowing for autumn use. *Carrots*, make a small sowing if they are in request for drawing young, also a few more *Onions* for the same purpose. The Tripoli Onion answers best. The autumn-sown ones transplanted in the spring will now be attaining their full growth; as soon as this is perceived lay the tops down with the back of a wooden rake for some time previous to pulling. *Celery*, the main crops must now be got out without delay. Let the plants be well supplied with water, and shaded for a few days if necessary. The early crops to be liberally supplied with liquid manure, and the soil about them frequently stirred with a fork; but by no means make any attempt at moulding up until they have nearly attained the desired growth. *Peas*, continue to earth up and stake, the last sowing of these may now be made. The Early Frame is generally recommended, but Knight's Dwarf Marrow will also succeed if the season prove fine. *Potatoes*, the spaces between the rows of early *Potatoes* should be deeply forked up, and planted with the latest crop of Brussels Sprouts, Kale, Coleworts, and other winter and spring Greens. They will not interfere with the well-doing of the *Potatoes*. *Scarlet Runners*, earth-up and stake the later-sown, unless they are required dwarf, when the tops must be frequently pinched out; but it is always best to stake them if possible both for neatness and productiveness. *Tomatoes*, keep them well thinned out and constantly nailed. *Turnips*, keep up good successional sowings, of which a large breadth may now be got in. Dry wood ashes or charred refuse sprinkled over them when they are wet is a good preventive against the fly.

FRUIT GARDEN.

Keep the young wood of wall trees constantly nailed in. Spur-in the young wood of Gooseberries and Currants, it increases their productiveness, and also the fineness of the fruit. Care will still be required to keep down the ravages of aphides on wall trees by frequently syringing. Strawberry plantations, that are to stand to bear another crop, to have all the superfluous runners cut away between the rows, and all weeds carefully removed; but on no account let any of the foliage be cut away at this season. Most kinds of fruit now ripe or ripening, will require the protection of nets to preserve them from birds. Peaches and Nectarines should have their final thinning when the stones in the fruit get firm and hard, as all the risk of dropping during the stoning process will then be over. Vines against walls to be nailed to the wall. Pinch out the points of the current year's wood (except the leaders), of Figs when they have made five and six joints.

GREENHOUSE AND CONSERVATORY.

Shading should be used sparingly, except on bright days, for during dull unsettled weather plants require all the light that conservatories, the roofs of which are partially shaded by twiners, afford, and are greatly benefited by an occasional gleam of sunshine. The beauty of most softwooded plants will be considerably prolonged by the use of weak liquid manure, which should be given frequently. Indeed such things as *Achimenes*, *Clerodendrons*, &c., may be had in full beauty from June to October through being liberally supplied with manure water; but this must not be given too strong at first. Keep the atmosphere as moist as can be done; but avoid damp on cold nights by leaving sufficient air to cause a gentle circulation, and spare no attention to keep the plants clear of insects. Chinese Primulas, especially the double varieties, if at all backward, should be placed in a cold frame and shaded from the sun, where they will make rapid progress, particularly if the pots stand on a slight bottom heat. A thorough revision of plants belonging to the greenhouse should now take place with the view of affording them a final shift for the season, giving, where necessary, support by judicious tying, and repairing irregularities of growth. The obvious reason for shifting during the summer is, that before the approach of winter the plants may possess a sufficient mass of roots to support them through that trying season.

FLOWER GARDEN.

Go over the beds frequently, and keep the young shoots of *Verbenas*, &c., nicely regulated and pegged down until the ground is fairly covered, after which the shoots may be allowed to grow more at liberty. On poor dry soils two or

three applications of weak manure water, given at intervals of a few days, and when the ground is moist, will greatly assist in getting the beds covered without loss of time. See that *Dahlias*, *Hollyhocks*, &c., are securely staked and properly tied as they advance in growth. Manure water will also be useful to these. Remove dead flowers and seed from *Roses*, and give the autumn-flowering varieties plenty of manure water, in order to keep them in vigorous health and secure plenty of wood for blooming in the autumn. Budding should be proceeded with in cloudy weather. Mildew is sometimes very troublesome after this season, and no time should be lost in dusting the infested plants with sulphur.

PITS AND FRAMES.

The stock here will now be growing freely, and should be frequently examined individually to see that all is going right, for plants when growing rapidly very speedily suffer through neglect in watering, or from the attacks of insects. Examine young specimens that were potted early in the season, and shift at once such as require more pot room, so as to get the pots moderately well filled with roots before the winter, in which state plants are much more easily carried through the winter than when either over or under-potted. *Leschenaultias* should be carefully examined for green fly. *Chorozemas*, *Bossiasas*, &c., must also be frequently examined for red spider and laid upon their sides on a clean mat and thoroughly washed with the syringe, repeating the syringing as often as may be necessary to eradicate the pest. Young specimens of valuable hardwooded plants should be carefully trained, keeping the shoots nicely tied out or pegged down in order to secure close compact specimens. W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

HERE our work has been much the same as in previous weeks, with the exception of clearing off our first Cauliflower, and dunging and trenching the ground for Strawberries—to be transferred from pots that were forced under glass—and clearing off some early *Potatoes*, to get in Brussels Sprouts and Scotch Cabbaging Kale. Dug down, also, some Strawberry-borders after being cleared of fruit, which borders are also supplied with dwarf bush Apple trees, and planted thickly with Colewort Cabbage, except for a square of 4 feet or so round the trees. We do not by any means recommend this hard cropping of fruit-tree borders; but *wast-do* has a language of its own, as with a small garden, and a continuous supply, there is little use to think of uncropped fruit-borders, however much you may desire them to be so. For all tender fruit the injury done is not so much owing to what the cultivated plants take from such a border as from the shade given, which keeps the soil cold; and as the surface is apt to become dry from the absorbing properties of the roots of the vegetables, or smaller fruits, as Strawberries, the roots of the trees are naturally inclined to go down deeper after moisture than is good for them.

Above we have spoken of clearing off the remains of the early Cauliflower, as in the very busy days of May and June, when every moment was valuable, heads were frequently cut, and the stumps left remaining until a slacker time could be obtained for their removal. In general, however, this is a bad, wasteful, slovenly plan—wasteful because the large leaves left on the stump continue to pump up for themselves much of the nourishing properties of the soil, as we found beneath such stumps the ground dry, and thoroughly permeated by roots, at the depth of 30 inches; wasteful, too, because they thus not only uselessly exhaust the soil, but the nourishment which the decomposed stumps and leaves would give to other crops is so much longer held in abeyance. The plan is slovenly, because, if followed in the case of a Cauliflower, it is apt to be followed in the case of Potato-haulm, Lettuces, &c., it being somewhat easier to cut a Lettuce than to pull it up and leave all that is not wanted for the table to give its nourishing properties to the rubbish-heap, and all such remains left in the garden give it an untidy appearance, conjuring up the ideas of a thorough cleaning-up day; whilst the prominent ideas in a well-kept garden should be constant tidiness, comfort, and elegance. Why should not a row or a bed of Cauliflower be

as interesting as a flower-bed? It has at least all the advantages of utility to recommend it. The cut-and-leave-stump system is also very deceptive to all but the individual who cuts. A quarter of Cauliflower which has been thus treated, seen at a little distance, would look a quarter of Cauliflower still. When the useless parts are at once removed, the superintendent or the proprietor can see what he has left, and take stock without an effort. From this cause alone we have known unpleasantness from circumstances that would be comical, but for the annoyance associated—such as gentlemen offering half a dozen or half a score of heads of Cauliflower to a neighbour, when he himself had not one left fit to cut.

This gossip about stumps of Cauliflower brings to our mind two questions that should have been answered a week ago. The first is, "What do you consider the *best size for Cauliflower* to be when sent to a gentleman's table?" We do not consider the question of size as of so much importance as the question of quality. Insure quality, and then size will be an advantage, for large parties especially. The larger the better, if the head is white, compact, firm, no floweriness on it, no openings, and forming about three parts of a solid ball. The same rule will hold good as to prize Cauliflower at shows. A large head, if at all open or flowery on the surface, or with open spaces between the parts of the heads, will be passed over, and the preference given to a smaller head if quite firm and compact. As to ourselves, for the parlour table we prefer compact heads rather under than over the ordinary size of a man's closed fist. When larger or beginning to open they are sent to the hall, and if they come in too fast even to suit rotations there, they are given in turns to the men who help to grow them.

This brings us to the other question from "A YOUNG GARDENER:" "My Cabbages are many of them beginning to split and my Cauliflowers to run because they come in faster than they can be used. Is it not a usual thing to give such vegetables to the labourers who choose to accept them? Would I not be perfectly right to do so?" We thoroughly approve of your intentions. It is a pity that what is fit for human food should be wasted; but if you wish to be safe you must dismiss from your mind all reliance in such matters on mere usage, and all feelings with respect to anything like right. The right alone rests with the proprietor, and if you are wise you will do nothing in the matter without receiving his full sanction. Even after this, such a commendable proceeding must be accompanied with prudence. After much observation and experience we consider that two things are essential. First, that you yourself see the vegetables thus distributed; and, secondly, that you take care that no more be given at a time than can be used at once by the receiver. There must be no inducement in the shape of quantity for the labourers to dispose of them. There are many high-minded proprietors who would not condescend to sell, but who feel a great pleasure in giving to their friends, and who are very pleased that any surplus should be given to the workmen; but we have known instances of great mortification, unpleasantness, and even the giving up of a good old benevolent usage, because it came out that the workmen sold what was given to them.

Well, then, in return for what we consider prudent advice, we want some of our readers and friends to help us. Of all vegetables there is nothing that delights more in *sewage water* and *manure water* of all kinds than Cauliflower. We have a pump for one sewage tank, and the men as yet have never said anything about it, as we do not think they have ever found the smell offensive. But our own nasal organs are excessively sensitive, and we are not satisfied with anything we have done to render the sewage inodorous before it is committed to the earth. After that, the earth soon makes all right. Now, what we want is some cheap and easily-obtainable substance, and one, too, which would not interfere with the nourishing value of the water—a substance which would have the desired effect, either when thrown into the water or, better still, placed in the barrel in which the sewage is pumped. A short paper on this subject from a practical scientific friend, would, we are sure, be read with great interest. Perhaps a correspondent who gave us some good ideas the other week would be good enough to amplify on the subject. The great essentials are cheapness, retaining nutritive properties, simplicity and safety in the application,

so that a common labourer may use it safely, and the humble cottager may apply it to the hole in which he husbands all his slops and washings for manure-waterings. We lately saw two plots of Cabbages in two neighbouring cottage gardens, those in the one plot having a light slaty woe-begone appearance, with the leaves flabby, and little or no hearts, whilst those in the other plot had nice firm hearts, and a rich dark appearance in their foliage—a beautiful contrast to their neighbours. The kinds were the same, and the culture and treatment much the same, with this exception, that from one house all the slops were allowed to pollute the highway, and from the other the most of all that could be saved was put to the roots of the Cabbages. Some half a dozen plants had been burnt up by an overdose, but this was knowledge which would be valued in future, and lead to diluting slops when otherwise too strong. In all cases it is safest to use such waterings weak enough.

FRUIT GARDEN.

Much the same as in previous weeks. Notwithstanding the showers, have had to water some heavy crops of Queens and other Strawberries, as the flower-stems looked as if inclined to droop. Want of watering when there is plenty of bloom is the chief cause of Strawberries failing to produce well. The first-turned-out Strawberry plants from forced pots are now coming nicely into bloom, and will come in as successions to such late kinds as the Elton. In all small gardens the fruitful plants of such late kinds as Elton and Eleanor should be marked for runners as stated the other week, as barrenness is more apt to be transmitted from them than from some of the earlier kinds.

ORNAMENTAL DEPARTMENT.

Here it would take a long article to tell all the ins and outs of potting and repotting greenhouse and stove plants, fresh arranging with huge Balsam plants, Scarlet Geraniums, &c., looking over beds, fastening and training plants, so as to have all the beds full, so that they may not have that desert appearance until August, of which a correspondent spoke lately, and which is a common accompaniment of the present system of flower gardening. This and various other matters we cannot now allude to, farther than to enter a protest against the idea so currently gaining ground, that fine flower gardens, say from July, and comparative dreariness in the spring, are the fault of the gardening body. Let the burden be laid on the right shoulders. Let labour, material, and means be given, and with previous experience, and the help of Mr. Fleming's little book, there would be no difficulty in having gardens gay from spring to November at least. But the truth is, that in a great many places the energies of gardeners are already overtaken to make the most of the bedding system for summer and autumn; and to fill the same number of beds continuously, say from March to the end of October, with the same means and the same expense for labour, is to attempt an impossibility, though the word impossible does not come much in our way. Where this extra expense cannot be afforded, and spring gardening is, as it ought to be, quite as much considered, and rather more valued than a blaze of colour from midsummer and onwards, then the right policy is not to grumble that the gardener cannot do this and that, however willing, but to curtail the extent of the planting, and thus to enable him to keep all in good order from spring to autumn. For this purpose a reserve garden and a great number of pots will be necessary, that when spring beds are removed they may at once be filled with plants in bloom.

One word as to thin and thick *planting of beds* in answer to two inquiries. Our rule would be to plant according to circumstances—that is, the common bedding plants, such as Scarlet Geraniums and Yellow Calceolarias. Where the finest possible show was desired in June and July we would put good plants in some 6 or 8 inches apart. Where the best display was wanted from August until frost came, then we would put in similar plants from 12 to 16 inches apart. It is true you may thin in the autumn those plants turned out thickly; but even then, independently of the trouble, they will not bloom so well generally as plants put in thinner, and that have thoroughly covered the beds without injuring each other. Circumstances, therefore, should regulate the thickness of our planting.—E. F.

TRADE CATALOGUES RECEIVED.

Smith & Simons, Argyle Arcade, Glasgow.—Catalogues of Dutch Flower Roots and Select Roses.

COVENT GARDEN MARKET.—JULY 9.

Supply good and demand brisk. Apples and Pears have made their appearance, the latter chiefly Jargonella from abroad, and of these a few good samples may be obtained. Plums are coming in abundantly from the continent. Pises, Grapes, and Strawberries are very good and quite sufficient for the demand. Peaches and Nectarines are more plentiful and prices are reduced. Melons are rather scarce, but of good quality; Figs more abundant. Common Cherries are bringing from 4d. to 6d. per lb. Of Currants there is a good supply of all kinds. Asparagus is nearly over. The supply of other vegetables is good.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples ½ sieve	1	6	0	0	Mulberries quart	0	0	0	0
Apricots doz.	1	0	3	0	Nectarines 10	0	20	0	0
Cherries lb.	1	0	2	0	Oranges 100	0	16	0	0
Currants, Red ½ sieve	3	6	5	0	Peaches doz.	12	0	30	0
Black do.	4	0	5	0	Pears (Kitchen) bush.	0	0	0	0
Figs doz.	4	0	8	0	dessert doz.	2	0	3	0
Filberts & Nuts 100 lbs.	0	0	0	0	Pine Apples lb.	6	0	10	0
Gooseberries ½ sieve	3	6	5	0	Plums ½ bush.	0	0	0	0
Grapes, Hamburgs lb.	4	0	8	0	Quinces do.	0	0	0	0
Muscats 6	0	12	0	0	Raspberries lb.	0	4	0	8
Lemons 100	4	0	10	0	Strawberries punnet	0	6	1	6
Melons each	4	0	10	0	Walnuts bush.	14	0	20	0

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes each	0	4	0	6	Leeks bunch	0	4	0	6
Asparagus bundle	3	0	6	0	Lettuce score	0	9	1	3
Beans Broad ½ sieve	1	6	0	0	Mushrooms pottle	1	0	2	0
Kidney qtn.	1	0	1	6	Must. & Cross, punnet	0	2	0	4
Beet, Red doz.	1	0	3	0	Onions bunch	0	4	0	6
Broccoli bundle	0	0	0	0	pickling quart	0	6	0	8
Brussels Sprouts ½ sieve	0	0	0	0	Parley ½ sieve	1	0	1	6
Cabbage doz.	0	9	1	6	Parsnips doz.	0	9	1	6
Capicums 100	0	0	0	0	Peas quart	0	6	1	6
Carrots bunch	0	5	0	8	 bushel	2	0	5	0
Cauliflower doz.	2	0	4	0	Potatoes sack	8	0	12	0
Celery bundle	1	6	2	0	New bushel	5	0	0	0
Cumbers each	0	6	1	0	Radishes doz. bunches	0	6	0	9
pickling doz.	0	0	0	0	Rhubarb bundle	0	0	0	0
Endive score	1	3	2	6	Savoy doz.	0	0	0	0
Fennel bunch	0	3	0	0	Sea-kale basket	0	0	0	0
Garlic and Shallots, lb.	0	8	0	0	Spinach sieve	1	0	2	0
Garlic & Pumpkins, each	0	0	0	0	Tomatoes doz.	1	0	3	0
Herbs bunch	0	3	0	0	Turnips bunch	0	4	0	6
Horseradish bundle	1	6	4	0	Vegetable Marrows doz.	1	0	2	0

TO CORRESPONDENTS.

•• We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to The Editors of the Journal of Horticulture, &c., 171, Fleet Street, London, E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

FIGS TREES INFESTED WITH SCALE (Old Subscriber).—Dissolve 4 ozs. of gum arabic in a quart of water, and paint the infested parts with it by means of a soft brush. Allow it to remain on a few days, then wash it off by strongly syringing the tree with water at 120°. In winter after the leaves have fallen dress the tree with a solution formed by dissolving 8 ozs. of Glabur compound in a gallon of soft water, and brush this well into the cracks and crevices of the wood, being careful not to injure the fruit buds.

GARLIC CULTURE (Idem).—Plant the offsets in rich ground in an open situation in February, and in rows 1 foot apart, and 6 inches from offset to offset in the rows. The drills should be drawn about an inch deep, and the offsets placed with their growing points upwards in the drill, and be gently pressed into the soil. When planted cover with an inch of fine light soil. Keep them clear of weeds, and when the tops turn yellow take up the roots, and tie them in bunches of about half-a-dozen, and suspend in any cool dry place.

GROWING CABBAGE SEED (Idem).—Sow the seed in April, pricking off the seedlings when strong enough, and finally plant out in rows 2 feet apart, and the same from plant to plant. Earth up and keep clear of weeds, and in autumn transplant into good rich deep soil and in rows a yard apart, and sufficiently deep in the soil to cover the stem to the lowest leaves. The Cabbages should be 2 feet apart. A sheltered situation is to be preferred. The plants will bloom in due time, and seed will follow soon afterwards.

STRANGING VINES (Idem).—They may be syringed every morning before the sun becomes powerful with clear soft water, except when in flower, and after the Grapes change for ripening. It is, however, much more advantageous to syringe Vines at the time of shutting up the house in the afternoon, sprinkling the paths, &c., the following morning.

CUCUMBERS DISEASED (F. C.).—The disease which is so prevalent at present amongst Cucumbers and the Cucurbitaceae family generally, is evidently of fungoid origin, the cause and cure of it being as yet concealed from scientific eyes. We know of nothing more likely to mitigate the evil than procuring sound seed from plants free from disease, and, after providing a mild bottom and top heat, to keep both sustained so as to make the plants grow freely; to employ soil that has been well exposed to the influence of the atmosphere, and moderately rich—that furnished by rotted turf being rich enough without any addition of manure or leaf mould; to renew the plants often, and when they have produced a fair crop and show symptoms of decreasing vigour, and it may be slight traces of the disease, to pull them up and throw them into the fire, and put in young plants in their places, having previously removed the old soil and replaced it by fresh sweet compost. We shall be obliged by any of our correspondents favouring us with particulars of anything they have found useful in remedying the effects of this disease, which threatens to become as great a scourge to the Cucurbitaceae as the Potato murrain was to the Potato a few years ago.—G. A.

COTTAGE GARDENERS' DICTIONARY (G. D., of H.).—Bohn's edition is the last. No supplement has yet been added.

ANTHRINUM AND OTHER SEEDS (A Young Amateur Subscriber).—Write to any of the great florists who advertise in our columns and ask them the same questions. They will readily reply. We never recommend tradesmen.

VINE LEAVES (E. P. Hall).—What you call an "eruption," only occurs on very vigorous Vines. It will not affect the crop. Keeping the house cooler, drier, and better ventilated usually prevents its occurrence.

CLOVER SEED (E. H. W.).—Some Clover seed is grown in all the counties of England where the climate is mild and the rainfall small; but it is grown most extensively, we believe, in Cambridgeshire. The largest quantity, however, is grown in the German States bordering on the Rhine, and it is exported chiefly from Hamburg; yet that which comes to England from Holland and Belgium has found its way thither principally from the German States. In 1861 there were imported into this country 198,120 cwts., in 1862, 168,974 cwts., and in 1863, 272,626 cwts. We have no means of ascertaining the quantity usually ripened in this country.

GROUND VINERY (A. S. A.).—For four penny postage stamps sent with your direction, you can have, free by post, the Number containing the plan and description. Or if you wait for a few weeks a Manual will be published at our office containing that and all other particulars relative to Vine-culture.

PLATYTERIUM STEMMARIA (H. A.).—This is the Fern you mean, and though you saw it growing in a greenhouse it flourishes more vigorously in a stove. It is a native of Guinea and introduced in 1822. You will find it described in some botanical works as *Acrostichum stemmaria*. The usual treatment of stove Ferns is all that it needs.

MAKING ASPARAGUS-BEDS (Novice).—We prefer making the beds any dry time in autumn from September to November. It is not of much moment whether the ends of the beds are north and south, or east and west, but preference is given to the first when we have the choice. The plants should be two and not more than three years old. They should be planted in the last week in March or first week in April. Any nurseryman can supply you with the right kind of plants. We do not recommend dealers.

LAPAGERIA ROSA CULTURE (A Subscriber).—It requires a compost of turfy peat with a little turfy loam added, abundant pot room, and perfect drainage. It requires watering every day from the time growth commences until it ceases, and double the quantity at a time to that given to a Fuchsia. It should be trained near the glass on the north side of a span-roof, or be slightly shaded if on a southern aspect. *Lastrea opaca* will do well in a cold greenhouse in winter.

STOPPING FUCHSIAS AND PELARGONIUMS TO BLOOM IN SEPTEMBER (A Young Amateur).—Fuchsias may be stopped until within six weeks of the time they are wanted to bloom, but to make sure if you stop them when this appears in print they will need no further stopping. Pelargoniums to bloom well in September should not be stopped after June.

ANTS (A. J. H.).—We do not think that they will injure either your Cucumber-roots or Mushroom-spawn. You may drive them away by sprinklings of guano or Scotch snuff. Were they in any other place watering frequently with gas ammoniacal water would banish them, but it might injure your crops.

MILDEW ON PEAS (W. L.).—On light soils the mildew may usually be prevented by manuring the soil liberally, mulching over the surface close up to the stems, and for a foot wide on each side, with stable manure, and watering freely in dry weather. Dusting with lime we do not think will be of any use. More vigour requires to be imparted to the plants.

SWEET MACE (Delta).—The plant so called by the south Derbyshire cottagers is *Tansy*, *Tanacetum vulgare*.

EVERGREENS FOR INSIDE BACK OF GREENHOUSE (E. G.).—For a strong free-growing evergreen for the back wall of the greenhouse, but the flowers are inconspicuous, the *Ficus microphylla* or *capensis* will answer well. For evergreens with a profusion of sweet yellow and whitish blossoms, you could have *Jasminum revolutum* and *Jasminum gracile*. For evergreens in bloom all the winter and spring, and which rather like a little shade in summer, commend us to the *Camellias*. They would grow capitally in such a raised narrow border.

DRYING ROSE LEAVES (Hortus).—Dry them for making pot pourri by placing them where a dry cold current of air can pass over them. The old Cabbage, Moss, and Tea-scented are the most scented.

VINES IN A PIT (J. M.).—There is no doubt whatever that the Vines will succeed planted in the pit and trained up its roof, if you drain the bottom of the pit, and prevent the roots of the Vines descending.

NAMES OF INSECTS (J. S. S.).—The insects in the pinneries which seem to feed and breed in the tan, and do not appear to injure either the Pines or stove plants, are an exotic Millipede, closely allied to our British species, *Polydesmus complanatus*. They have, doubtless, been imported with foreign plants. These insects are generally considered to feed on decaying vegetable matter.—W.

YELLOW PLANTS SHEDDING THEIR FRUIT (*J. M. Gleason*).—We think extra luxuriance is the cause of your Melons dropping, and so early. Lessen luxuriance by giving less bottom heat, no more water than will just keep the leaves from flagging, and plenty of air day and night, if at the latter period the atmospheric temperature do not fall below 65° and from that to 60°. No doubt the roots run too freely in your rich turf and cocoanut fibre. We are obliged by the information about Broom and caterpillars.

MUSA CAVENDISHII CULTURE (*D. G.*).—Your *Musa Cavendishii* is doing well. Eighty fruit is a goodly number to swell well, and Nature seems to be doing what she expected to get some help in doing. A higher temperature, of from 75° to 85°, will not cause mere fruit to set, but thinning them much may do so. When your plant has fruited, it is best to encourage it to make a sucker or two; then take it up, detach the young plant, plant it in new fresh soil, and ere long it will rival its parent. This is a better plan than keeping the old stumps. It is not common yet to have fruitful comes on the Wellingtonia.

NAMES OF FRUIT (*Thomas Record*).—The Strawberries we should say are both Keens' Seedling, but it is impossible to tell from a few fruit only, particularly as there are now so many sorts very similar to that variety. The Grape is Black Prince. (*John Crofts*).—No. 2, Elruge Nectarine; 3, Barrington; 5, Royal George. We got in confusion with Nos. 1 and 4. That which is quite pale at the stone is Noblesse, and that which is red is Red Magdalene.

NAMES OF PLANTS (*W. H. Mayne*).—The white flower is a *Watsonia*, not a *Glaudiola*, but we cannot say which species without seeing the plant. The shrub is *Orethamnium thyrsoideum*, D. C. (*Y. Z.*).—1, *Lastrea decurrens*, J. Sm.; 2, *Lastrea dilatata*, Presl.; perhaps the variety *Standishii*; but the specimen is too young to enable us to speak with certainty; 3, *Erinus alpinus*; 4, a *Begonia*, we cannot say which species, for there are upwards of 350 known to botanists, and none of them can be accurately named from a single withered leaf; 5, *Litobrochia vesperillonis*, J. Sm.; 6, *Selaginella cuspidata*, Link. (*S. H. W. Reading*).—1, *Lastrea spinulosa*, Presl.; 2, *L. Filix-mas*, var. *palencosa*, Moore. You will find *Lastrea rigida* in the "British Ferns," published at our office. *L. quinquangulare* is not in either of our Fern books, and we cannot refer you to any English description of it. It is said to be from West Africa, and is allied to *L. decomposita*, of which, indeed, some authors consider it a variety. It was first named and described by Kunze in the volume of the "Linnæa" for 1850. (*S. A. P.*).—1, impossible to name the *Lobelia* from such a miserable scrap; 2, *Faretea suffruticosa*, D. C.; 3, *Carastium tomentosum*, L.; 4, *Phlox maculata*, var. *candida*, Bth.; 5, *Helianthemum*, sp. (*Marple*).—1, *Polystichum aculeatum* (both); 2, too young to be recognised; 3, *Aichemilla vulgaris*, L. (*W. L.*).—*Cladradia tinctoria*, Raf.

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

POULTRY CLUB JUDGES.

I HAVE a letter before me from Mr. Hewitt, stating that he communicated to you *privately* respecting his being a judge to the Poultry Club, and how you can justify the way in which you have published the correspondence I am at a loss to know. The whole tenor of your remarks appears to have no other object in view than to attempt to injure the proceedings of the Poultry Club, in proof of which, I beg to quote the following extracts from Mr. Hewitt's letter to me, dated 30th June:—

"I can assure you that it is impossible for any one to feel more annoyed than I do at the paragraph in question, nor could any one be more astonished. About the date of your first letter I received from Mr. Dolby two letters, requesting me to aid the proposed Islington Show, by a notice in THE JOURNAL OF HORTICULTURE. I wrote one, as customary, sent it in a separate letter; but even then, well knowing there was a good deal of 'ear-wiggling' going on from the rear against the Club, I wrote another letter to the Editors, explaining *privately* that in my case the restrictions of rules were removed. This letter was itself headed 'private,' twice dashed, and even the envelope similarly endorsed. By the next morning's post I received so very extraordinary and extreme a reply of disapproval, that I actually went up to London. I wrote a second, very much shorter, simply stating particulars of the prize list. This, too, was virtually refused, and in lieu of it eventually the paragraph appeared in print that is justly complained of." See THE JOURNAL OF HORTICULTURE of the 28th of June.

Such an uncalled for publication of a private and confidential correspondence appears to me to be a great breach of faith.

Wishing to secure the services of such an upright Judge as Mr. Hewitt, I was anxious to make any sacrifice to meet his views, and the offer to waive the rules was merely a tribute to the great ability and acknowledged experience of the greatest poultry judge in the world—a tribute which no other judge may ever expect.

Allow me finally to state that three members of the Club have consented to act as judges, who have been the most extensive breeders and successful exhibitors in the kingdom; so that you will find, probably, not as you imagine, that the

rules of the Club are inoperative, and their application an impossibility, but the reverse.—EDWD. TUDMAN, *As Hon. Sec. to Poultry Club*.

[We very readily insert this communication. It is quite true that Mr. Hewitt's letter was marked "private," but as we had seen him subsequently, and stated the substance of what we should say in the first notice of his appointment, and to which he did not object, we considered it only due to him to state what we did in our second notice. We think the Club quite right, as you say, in securing the benefit of his great ability and acknowledged experience, and we are quite sure he will act independently.]

So far are we from wishing to injure the Poultry Club, that we hope it may succeed in establishing many exhibitions, and that the awards of the judges it appoints may be satisfactory. What we object to is any competent judge (and no other should be appointed), being bound to adhere to rules rather than to the dictates of his own experienced judgment.]

REARING CHICKENS AND DUCKLINGS.

I SYMPATHISE with "A. K. C." as to the loss of his Dorking chickens. The boundless range and over-feeding are most likely the cause. I have found, in breeding poultry, that the Dorking and Spanish are the most difficult to rear. "A. K. C." will do well to confine his chickens, with the hen, in a coop, away from old dead rotten wood, and not where fungi and worms abound. Feed them upon rice boiled in milk, and, as a change, give sharps and oatmeal mixed with milk, the milk to be sweet; skimmed milk will do.

"A FARMER'S WIFE" will do better to keep only one drake to six Ducks. Kill one of the drakes, and if she likes keep one of the young ones of this year's brood. I have one drake to four Aylesbury Ducks. My troops of young Ducks range from sixteen to thirty-two; ninety-nine in all, out of 132 eggs. All are fed with boiled rice and meal.—J. D.

POULTRY JUDGING.

WHO is not glad to see "WILTSHIRE RECTOR," whether it be in his practical remarks, or his New Year's Eve Dream? I read, and read again, and on seeing "WILTSHIRE RECTOR" at the end, am generally disposed to agree to all he writes; but in his "Rules for Poultry Judging," I cannot go with him. I have thought this subject over once and again, but I do not see how you are to make the living individuality which goes to make up the judge merge into the machine, which he must become if he is to judge by a certain code of rules, with which, possibly, he may not agree.

On a matter of opinion, it is difficult to force any person to act contrary to his own notions. But, go further—frame your rules, place them in the hands of every poultry-breeder, and it must still rest with the judge to determine: it is his individual opinion which must decide the merits—whether, for instance, that pen which is evenly matched is not more entitled to the coveted honour than that which has one or, perhaps, two perfect birds, agreeing to the "code of laws" in every particular.

Again, the value of the points in each separate bird must be considered as minutely as the Chinese painter measured the distance between the small-pox marks on the old gentleman's face, that he might transfer them to the canvas intended for presentation to his lady love. What reception will this minuteness receive at the hands of unsuccessful exhibitors? Why, very much like that bestowed on the poor Chinaman, who was unceremoniously kicked down stairs by his rather testy sitter when the discovery was made. It is "agin natur," as Sam Slick would say, for others to discover faults in birds, whose faults, by constant glossing over, we the owners have learnt rather to like than otherwise. This, perhaps, applies much more closely to "exhibitors in a small way;" we have not the unlimited means to buy the perfect specimens, and must in some measure be content with what we can produce.

When "WILTSHIRE RECTOR" says, "I have heard an exhibitor remark, 'I do not know whether I shall take any prizes at this show; they depend upon who is the judge. Mr. A likes my sort of birds, &c.'" This may be so; but

"WILTSHIRE RECTOR" and "the exhibitor" both seem to forget that it is not always the same pens or the same exhibitors who compete: that even supposing they do, the condition of the pens may have altered. It reminds me somewhat of my man Friday; although he really does attend thoroughly to my poultry, yet he hates cordially all "vowls," wishes "measter 'ud tell he to wring all their necks, shouldn't have to tell 'un twice." Although he dislikes the "vowls," he has no objection to a slice of prize money, and owing to sundry windfalls in this way he has learnt to appreciate my Brahmas. The wind, however, changed, and instead of prizes came commendations and high commendations. I do not blame the judges or wish for a code of rules, &c. I like prizes—who doesn't? but Friday intimated, "Thick ther judge up their warr'n't much of a judge not to gie the big cock a prize;" and a few days after when the next dose of high commendations arrived, he remarked, "Thick thur sort of vowl be gwine out o' vashion, be'ant they?" I strove to convince him that there were better birds there, but I fear I did not succeed. I am sure he thinks the powers of the judge in question very limited. "WILTSHIRE RECTOR," perhaps, recollects that a few months back there was a great talk about the Poultry Club; a code of rules seemed about to appear directly. Where are they? Have the members found it impossible to frame them to satisfy all? I know by experience it is not pleasant to lose, but, as Hood says, "What can't be cured must be endured." We have, by somewhat general consent, arrived at certain landmarks; and, after all, I imagine, wrongly perhaps, that something is necessary to make the good judge that no rules can give—something, in fact, which is inherent in the judge himself, and not in any rules, however good. Certain points appear settled—thus even matching and condition in all pens, whatever the breed; a certain form of comb in some breeds, a variety in others; size, large in some, small in others; a certain character of feathers in a variety of breeds, which may be styled "birds in feathers;" a clean leg in some, feathered in others. Such general points, with others, we all know, or ought to know. Were we to know much more it would be contrary to experience to obtain universal satisfaction. Each judge must see with his own eyes, and mentally make his own calculations as to the relative merits of competing pens. It would add immensely to the labours of a judge if at each pen he must, with pencil in hand, make a calculation of points; and I am rather disposed to believe that the best judges of the present day would not judge under such conditions.—Y. B. A. Z.

SELBY, TADCASTER, AND MARKET WEIGHTON AGRICULTURAL SOCIETY'S POULTRY SHOW.

The eleventh annual Exhibition of this Society was held at Tadcaster on Friday, the 1st inst. There was a good show of poultry, comprising about 150 pens. The prizes were awarded by Mr. Geo. Jackson and Mr. Alex. Cattley, of York.

SPANISH.—First, M. Kidd, Tadcaster. Second, W. Houseman, Tadcaster. **CHICKENS.**—Prize, F. Powell, Knaresborough. **DORKING.**—First, T. E. Kell, Wetherby. Second, T. B. Ireland, Tadcaster. **CHICKENS.**—Prize, J. E. Kell. Commended, Mrs. Oliver, Bolton Lodge, Tadcaster. **CHINA (Any colour).**—First, W. Cannan, Bradford. Second, R. Dewar, Knaresborough. **CHICKENS.**—Prize, R. Dewar. **MALAY.**—First, O. A. Young, Driffield. Second, withheld. **CHICKENS.**—Prize, O. A. Young. **STOCK GAMES COCK.**—First, R. Bickers, Beverley. Second, T. B. Ireland. **PAIR OF GAME HENS.**—First, J. Harrison, Holbeck, Leeds. Second, T. B. Ireland. **GAME CHICKENS.**—Prize, J. Barker, jun., Dunnington, York. **HAMPSHIRE (Golden-spangled).**—First and Second, W. Cannan. Commended, G. Holmes, Great Driffield. **CHICKENS.**—Prize, C. Snowden, Tockwith. **HAMPSHIRE (Silver-spangled).**—First and Second, W. Cannan. **CHICKENS.**—Prize, W. Cannan. **GOLDEN-PENCILED HAMPSHIRE COCK.**—First and Second, W. Cannan. **HAMPSHIRE (Silver-spangled).**—First and Second, W. Cannan. **CUTTLEBATE OR CORNICAN.**—First, W. Cannan. Second, withheld. **POULTRY.**—First, W. Cannan. Second, O. A. Young. **ANY OTHER VARIETY.**—First, F. Powell (Brahma). Second, W. Cannan (Black Brahma). **CHICKENS.**—Prize, Mrs. Moore, Boston Spa (White Dorking). Commended, F. Powell (Brahma Pootra); H. Lacy (Brahma Pootra). **BANTAM (Any variety).**—First, T. E. Kell (Game). Second and Commended, Lady Lonsborough (Golden). Commended, W. Cannan (Golden). **COCK OF ANY OTHER BREED.**—Prize, W. Cannan.

PAIR OF HENS OF ANY OTHER BREED.—Prize, T. E. Kell. Commended, W. Cannan; T. B. Ireland. **GREEN.**—First, O. A. Young. Second and Commended, W. K. Goodbarne. **DUCKS (Any variety except Aylesbury).**—First, O. A. Young. Second, W. H. Park, Mewton Kyrie. Commended, W. Cannan. **DUCKS (Aylesbury).**—First, W. Cannan. Second, O. A. Young. **TURKEYS.**—First, W. Cannan. Second, Mrs. Walton, North Millford. Commended, Mrs. Blacker, Healaugh.

DOMINIQUE FOWLS.

THIS variety is, very justly, becoming popular where best known, especially for hardiness. We find the following description of it in a very valuable article upon poultry, in the late report of the Department of Agriculture.

"The Dominique is the best fowl of common stock that we have, and is the only fowl in the country that has enough distinct characteristics to entitle it to a name. These fowls are full medium size, being but little less in weight than the Dorking, have full breasts, rounded full bodies, double or single combs, and yellow legs. Their main plumage has a light grey ground colour, while each feather is barred crosswise with a darker shade. They are frequently known by the name 'Hawk-coloured fowls.' They are hardy, easily raised, retain their peculiarities with great tenacity, have yellow skins, a colour preferred by many for a market fowl; and taking these fowls all in all, they are one of the best varieties in common use."

The flesh is good and they are fine layers. They roost high, and hence are not in the way like the lazy Asiatic fowls.

The Black Spanish are most beautiful fowls, but a winter like the past is very disastrous to them. Undoubtedly, with extra care in winter, they are the best layers in the world; but we would not recommend them for the general fowl of the farm by the side of the Dominique. The Spanish for a village or city are first.

To substantiate our estimate of these fowls we will state that Mr. Wentworth, who has experimented with almost every known kind of fowl, has abandoned all others, and is now starting with the Dominique.—(Prairie Farmer).

HEN PHEASANT ASSUMING THE PLUMAGE OF THE MALE BIRD.

THIS change of feather is not nearly of so rare occurrence as many suppose it to be; and as the subject is now before the public, I willingly add my own experience to the statements of others already published.

Some five and twenty years back I obtained a brood of young Pheasants, which after a time became exceedingly docile and familiar. Without exception they proved of the general common feather. A portion of them I kept by me for many years. The hens all laid well, and the eggs proved fertile when placed under common fowls. Matters went on in this way for some ten years or more, when I found one of the hens become exceedingly pugnacious, ill-treating alike both her female and male companions. She ceased laying altogether, or rather did not commence laying at all at the customary time, though the others were as productive as heretofore. Her worst feature now was, she ate every egg she possibly could obtain of the other Pheasants, and this caused me to remove her to run with some fowls, whose eggs she also took a fancy to, with a zest equally depraved as when in the company of her fellows. It was when taking her from her original pen that I first perceived she was assuming the feather of the cock bird. It showed the first year chiefly about the neck and head, the breast also becoming of a peculiar ruddy hue. That first moult, too, the tail-feathers were evidently much longer than in the other hen pheasants; and during the three or four years I afterwards kept her she gradually altered more and more to the cock's plumage. At length she became so indomitable a virago as to allow no other bird of any kind to live in the same aviary. She was then killed, and I still have her preserved. The head and neck feathers are precisely the same metallic bluish green as a cock's would be, but she never assumed the coral velvety appearance round the eye as in the cock. Her breast is of the ground colour of a cock, but devoid of the black markings. The back and tail feathers are still much

the colour of the hen Pheasant, but her tail had each year become longer and longer, till the principal feathers reached that of a male bird. They are peculiar, the shaft of the longest feathers being somewhat depressed.

A neighbour of mine had also a hen English Pheasant that changed its feather in the same way, but to a much greater degree, a few years after: indeed she, when living, looked at first sight like a young cock. She, too, became furious to other birds, and an inveterate egg-eater. When I last saw her she was closely approaching a clear blotting-paper colour, and had very slight markings on the breast, towards the crop only. She, too, was an old-reared bird.

From what I have now stated alone, facts seem to carry out the supposition that all such birds are old birds, and in several shot Pheasants of like character they were evidently aged specimens. It is well here to mention, that in all cases I ever narrowly examined, the ovary was much diseased, though the bird showed well as to flesh or feather—in fact, appeared like an expressly fattened fowl. But I must briefly mention another case of a somewhat different character.

I once hatched a young Pheasant that at her first moult, long before she had arrived at laying time, became of the questionable feather referred to; but as she consumed every egg within her reach, and was the worst of neighbours to all others, as time drew on her last appearance was on the dinner-table, devoid of all outward peculiarities. I also have known the same fact in a fowl, a Sebright Gold-laced Bantam hen, from whose eggs I for years reared many chickens of excellent markings. At one moult she obtained partial sickle feathers with a hackle and saddle feather that would be held as abominable in this particular breed; yet prior to this moult so perfectly feathered had she been, that at three different Birmingham shows she figured in the first-prize pen. Her spirit of ill-will was then similar to the Pheasant's before named, and as I wanted eggs (though she never laid after her change), and she ate all other eggs at hand, I gave her to a medical friend, who, on examination after he had killed her, found a diseased ovary, as I had anticipated would be the case.

In conclusion, it appears that all such birds are useless and very expensive as hobbies if allowed the run with others, and therefore it is expedient to put them aside as soon as this strange freak is first manifested.—EDWARD HEWITT, *Eden Cottage, Sparkbrook, Birmingham.*

ARTIFICIAL SWARMING.

THE following account of my first and successful attempt at making an artificial swarm may, perhaps, interest some of your readers, as it took place under peculiar circumstances.

In May last I received a hive of Ligurian bees from "A DEVONSHIRE BEE-KEEPER." Early in the morning of the 4th of June I found the queen in a dying state on the alighting-board, and the bees passing in and out over her body with the most perfect indifference. On the 13th several young queens were heard piping; but day after day the weather prevented their swarming. On the 16th they attempted to come off, but the high wind drove them back again. The next morning I expected to find the super-numerary princesses thrown out; however, they were still piping, and the weather was wet and cold, so I determined to divide the bees.

The stock which I shall call A was taken to an unfurnished room, and placed at some distance from the window. An empty hive, which I shall name B, was placed in the window. Both hives are made on the Woodbury plan. I removed the crown-board from A and puffed in some smoke; then, taking out a frame from the middle of the hive, I carried it to the window and found it contained what I wanted—a royal cell with a piping queen in it, and a fine young queen at liberty on the comb. This young lady I captured and returned to A. Having fixed the frame in B, and placed the crown-board on, I proceeded to brush a sufficient number of bees off the bars of A to keep the brood warm during the night. Then I placed the crown-board on A, closed the entrance, collected with a feather the bees which were trying to get out of the window, and placed them at the entrance of the hive. They all settled in before dark, and

the hive was placed in the house which A had occupied, and A conveyed to another part of the garden. The next day was fine, and all the bees that left A went to B, which by the evening contained a good swarm, and a sufficient number of bees were left behind to carry on the work of the hive. The young queen in B piped for about two hours, and the piping continued in A until the next evening, when a fierce slaughter of the drones took place, and continued until all were lying dead on the floor-board, from which I swept them the next day. The bees in A have not settled down to their work as I could wish, and there appears to be a nervous timidity about them. They seem afraid to leave their hive, guarding the entrance against some foe, and disputing the passage of their own bees into the hive. A little pollen is carried in, but they leave off working early in the afternoon. I do not think anything can be wrong with the queen. I found two young grey bees on the alighting-board yesterday morning, and some drones that appeared after the great slaughter were worried. I think this nervousness must have been occasioned by the unaccountable desertion from their hive. Have any of your readers met with anything similar to this? The young queen in A is much darker than her mother was, whom, no doubt, she had slaughtered.

If I ever perform an operation of this kind again I shall provide myself with indiarubber gloves, as I was very much stung through my dogskin. The moment I moved the frame I was attacked most savagely, and my left hand was very much swollen the next day.

This is the second instance I have known of young queens having been kept beyond three days. I once had a hive that swarmed on a Monday early, having been kept back by the weather on the evening when piping commenced, and they piped until the next Sunday, when they swarmed. The whole of the week was wet and cold.—J. L.

[The cessation of honey-gathering in A is owing to all bees of sufficient age for this purpose having deserted it, and returned to the old spot. Time will set this right. The young queen will become much lighter when, as a matron, she is expanded to her full size. "A DEVONSHIRE BEE-KEEPER" says, "Apologise for having misled this lady so much as to induce her to use leather gloves," and we do apologise; and as bees do not sting us through our gloves, we can only conclude that the skins of Editors are very thick—and so they need to be.]

FLOWERS FOR BEES.

THE following notes are published in reply to a correspondent, "A YOUNG BEE-KEEPER:"—

BORAGE is probably the best of all bee flowers. It flowers in July (earlier if self-sown), on through the summer until cut off by autumn frosts, and is an annual. It should be sown in an open situation in beds 4 feet wide, and as long as desired, sowing the seed broadcast, about an inch apart over the surface and then throwing the alleys out over the beds, so as to cover the seed with from a quarter to half an inch deep of soil. A sowing made the first week in March, and another the second week in April, will afford a supply of flowers in most seasons from June until November.

MIGNONETTE.—Sow the seed the first week in April in beds as described for borage, only it should be sown more thickly, and be only just covered with light fine soil. It flowers in July onwards through the season.

SALVIA NEMOROSA.—An herbaceous perennial with blue flowers. It is readily increased by divisions of the root, which should be taken off, or the old stools or plants divided, in March, planting the offsets like Sage slips in rows 2 feet apart and 1 foot from plant to plant in the rows; or they may be planted in four-foot beds with one-foot alleys between, and three rows in a bed. It delights in a light gravelly soil, but will grow in almost all soils and situations. Planted on sunny hedgebanks, and on the borders of woods it grows well, being not only useful for bee forage but highly ornamental. It should have an open situation, and after the stems decay they should be cut down to the ground, and a little leaf mould or any waste vegetable refuse placed around the stools between the rows, which should be neatly forked-in in the April following. Beyond keeping clear of weeds

it needs no further attention. It flowers from June to October.

CROCUSES.—The bulbs of these should be planted in rows by the sides of walks, 1 foot apart and about 3 inches deep, in October, or in clumps, of three, five, or more together. Planted in sunny situations in shrubberies they add a charm to such places, and will grow well in all soils. Light soils, however, are preferable. They need no care beyond taking up once in three years, and dividing, planting a number in the same place again the same day, and others on hedge-banks, in fact anywhere not much overshadowed by trees. They should be replanted and divided in October.

SINGLES BLUE HEPATICA.—These, like crocuses, will grow anywhere in open situations, and are increased by division of the plant. They are best divided in autumn after the foliage decays, parting them so that two or three crowns are left to each division, which may then be planted in rows 1 foot apart, and the same distance between the rows. They should be planted so that the crowns are level with the surface. In future years it is only necessary to place a little fresh soil or waste refuse of any kind between the rows, to dig or fork it neatly into the soil, and divide the plants when too large for the allotted space, and replant. They flower early, often in January, and last a long time in flower. We have seen them in April. Crocuses usually flower in March and April.

BEEES IN AUSTRALIA.

ENGLISH apiarians will probably be interested in the following extract from the address of Dr. Bennett, delivered before his Excellency the Governor (Sir John Young), and others, at the annual meeting of the Acclimatisation Society of New South Wales, on Monday, April 4th, 1864.—G. F. B., *Spalding*.

"The English-imported bee has nearly driven away the small Australian stingless species, and the recent introduction of the Ligurian bee will be a great acquisition to the colonies, being very prolific, and yielding a larger supply of honey and wax than any other species; and the rearing of bees has the advantage of requiring very little capital, and but a small amount of labour. The quantity and value of the honey and beeswax produced in the colony is very great, and the latter has lately been exported to England at a remunerative profit."

A footnote in the *Sydney Morning Herald* adds the following:—

"I have been informed that the small black stingless bee in Australia has sometimes been seen in close proximity to the English bee, both having formed their nests in the same hollow of a tree, being only divided by a mud partition. When in that position one or the other lose their brood; they attack each other, and the Australian bee contrives to cut off the wings of the English bee. The honey from the native bee has a more agreeable acidulous flavour than that produced by the naturalised English insect."

SUCCESSFULLY LIGURIANISING AN APIARY.

HAVING had a beautiful Ligurian queen sent to me last September, I removed the English queen from a common stock of bees in one of my improved observatory-hives, the four sides and the top of which are of glass, and placed her at their head. She immediately commenced laying worker eggs. I examined the combs on the 9th of October, and found many young Ligurians hatched, and the queen still laying eggs. In none of my common stocks could I find any eggs on that day. This, I thought, was a very convincing proof of the great superiority of the Ligurians over the English queens in their prolific powers. The stock passed through the winter in the best possible health. The hive was exposed in an open latticed arbour, without any cover over the glass; and the thermometer inside of the hive, observations of which were taken three times each day, indicated a mean temperature of 3.88° in December, 3.90° in January, and 4.55° in February, higher than the mean temperature inside my other hives.

March 14th.—I cleaned the floor-board for the first time,

and only found two dead bees. I had not before seen a single dead bee upon it during the whole winter.

April 20th.—I commenced my Ligurianising operations by removing the queen out of one of my English stocks, and gave to it two Ligurian combs filled with eggs and brood. I also removed all the drone brood and cells out of thirteen common stocks.

April 22nd.—Examined the two Ligurian combs, and found no signs of any royal cells commenced (second day).

April 25th.—Examined the two combs and found the bees had about half made a royal cell on each comb, but only one of which contained larvæ, the other cell was empty (fifth day). They had also about half made three royal cells on the next comb, which was entirely empty.

April 27th.—Examined the two Ligurian combs and found the cell containing the larvæ enlarged. They had about half made another royal cell on the other comb, and the one previously made was in the same state as it was on the 25th, neither of them contained eggs or larvæ. The bees had also constructed four more royal cells on the empty comb (seventh day).

April 29th.—Examined the combs and found the larvæ in the royal cell nearly straight, and the bees about finishing the closing of the royal cell (ninth day). The two cells on the other comb, and the seven royal cells on the empty comb, were in the same state as on the 27th. I put another comb, containing drone and worker brood and eggs, into the hive out of the Ligurian stock, and I also placed worker eggs out of it into the nine empty royal cells, but I afterwards found that the bees removed all of them again.

This is only the account of the operations with one stock, but the end of it all was, that on the 31st of May I had beautiful Ligurian queens at the head of fourteen stocks, and had also hatched many more Ligurian queens than I required. On that day I made my first Ligurian swarm artificially, a very large one, and that night they had their queen hatched, and have done very well since.

My great difficulty has been to prevent a single common drone being hatched in my apiary. About every ten days I examined every comb in each hive, and removed all the drone eggs or cells that I found the bees had made. I shall now be able to keep the Ligurians pure, as I have only Ligurian drones in my apiary, and there is not a single common stock within about three miles. Thus I shall not have the same difficulties to contend with in keeping them pure that Mr. Woodbury has, as he is surrounded by common English bees. My old Ligurian queen is the finest and most beautiful one I ever saw, and she has certainly done wonders in laying eggs this spring. By the middle of May I had removed from her no less than twenty-two combs nearly filled with worker and drone brood and eggs, and the hive is crowded with bees quite ready for swarming.—WM. CARR, *Clayton Bridge Apiary, Newton Heath, near Manchester*.

TRY A "BEE-BOB."

MR. LANGSTROTH says, "Having noticed that a new swarm will almost always alight where they see a mass of clustering bees, I find that they can be determined to some selected spot by an old black hat, or even a mullein stalk, which, when coloured black, can hardly be distinguished at a distance from a clustering swarm. A black woollen stocking, or piece of cloth, fastened to a shady limb in plain sight of the hives, and where the bees can be most conveniently hived, would probably answer as good a purpose. Swarms are not only attracted by the bee-like colour of such objects, but are more readily induced to alight upon them if they furnish something to which they can easily cling, the better to support their grape-like clusters. By proper precautions before the first swarms issue, the bee-keeper may so educate his favourites that they will seldom alight anywhere but on the spot which he has previously selected. The Rev. Thos. P. Hunt, of Wyoming, Penn., has devised an amusing plan, by which he says that he can at all times prevent a swarm of bees from leaving his premises. Before his stocks swarm he collects a number of dead bees, and stringing them with a needle and thread, as worms are strung for catching eels, he makes of them a ball about the size of an egg, leaving a few strands loose. By carrying,

fastened to a pole, this 'bee-bob' about his apiary when the bees are swarming, or by placing it in some central position, he invariably secures every swarm."

I wish some of my apiarian friends would try a "bee-bob" of some kind, and report results in THE JOURNAL OF HORTICULTURE.—A DEVONSHIRE BEE-KEEPER.

APIARIAN NOTES.

A RULE TO ASCERTAIN THE LOSS OF QUEENS.—Soon after they swarm, the queens when on a bridal trip, and are enjoying the society of the drones, as they course through the air, become so intoxicated with their amorous enjoyments as to be confounded on their return. Not recognising their distinctive homes, they mistakingly land in a foreign colony, only to meet a sudden death by the subjects of a queen, whose jealousy prompts them to the attack. Should we inspect a hive about this time, and find no eggs or brood, it is proof positive that it has no queen. The usual time for this is about twenty days after the issue of the first swarm. Again, if the bees allow the drones to remain in the hive long after the general massacre—say to the 1st of September or October—it is a never-failing sign that the queen is wanting, or that she is in an unhealthy condition. In such a state the stock should be supplied with a queen immediately, or united to another.

RULES FOR PURCHASING BEES.—Select two-year-old stocks of large size, that swarmed the previous year. It has been demonstrated that such stocks have young and vigorous queens, and are generally well-conditioned, promising a healthy generation. A very old stock should be rejected, even if it swarmed the year before and contained a yearling queen, for the obvious reason that the bees, having been bred in the old contracted cells, will be found of small size and insignificant in numbers. If you take your hive away to get a swarm placed into it, always purchase the first or prime swarm, and see that it is given you. Do not be put off with a second or late swarm. Choose a stock to commence with as you would choose a wife—get the best you can find. If you obtain one in the old box-hive invert it, and secure the bees by a cloth tacked securely over the bottom. Take it home when the air is cool, attend to it regularly, obey the directions as given, and then congratulate yourself as having started right.

In the purchase of bees there are many things it is well to observe. Remember if stock-hives are to be procured, ascertain the age of the queen. To select a young healthy mother seems to be a forward step towards a vigorous progeny.—(*Flander's New Bee-book, American.*)

FOUL BROOD AND DYSENTERY.

As it is the desire of some of your correspondents to learn from different observers their experience of foul brood, I give you what has come under my notice regarding it during the last few months. The first case was a hive that was much diseased, and was broken up in autumn, and the contents given to a healthy hive for the very purpose of proving infection, by "A STEWARTON APIARIAN," and no bad result has accrued therefrom since. The hive is all but healthy. The second is a hive in my own apiary which was almost reduced to a mere handful in the spring from what is termed dysentery. But I differ a little in my opinion, thinking it rather an overgorging, or feeding in winter more than they ought to do, in consequence of sudden changes of temperature arousing them to activity and causing them to feed oftener than would have been the case had they been shaded from the sun. At all events I have never found those attacked that were thus shaded. The bees were not able to fly, falling in hundreds on the ground, and leaving their excrements in the hive until it was thoroughly polluted. I took the advantage of the first fine day and turned the hive up to the rays of the sun for an hour and half till the bees were perfectly dry and able to fly. I then removed all filth, and took away one stock-box (it being in a square bar-and-slide hive), leaving in it one box only. It immediately commenced breeding, being about six weeks earlier than the majority of hives here. The spring this season was backward until April, the weather then continuing favourable till the 17th of May,

when it took a turn and continued increasing in cold till the 31st, when it appears to have reached its climax. The frost on the 31st of May and 2nd of June was so severe that icicles were suspended from the roofs of the bee-houses and covers, whilst the ice was an eighth of an inch thick, and newly-wrought ground was penetrated half an inch, so that all tender plants and the Potato crop have suffered severely.

But I must return to the condition of the hive. It had not been long in the breeding state when I found there was something wrong from the strong effluvia emitted. I immediately turned it up and examined it, when I found it in a backward state, with foul brood, and the bees scattered throughout the whole hive, evidently paying all the attention they could to the scattered brood. I used no means whatever to restore it farther than cutting out some of the worst combs for microscopical examination. This forced the bees to concentrate themselves, having very few combs for the queen's peregrinations, so that at the present time it is in a very thriving state and has got additional room. I am not, however, oversanguine of its future prosperity, but if spared I will report to you how it gets on.—A LANARKSHIRE BEE-KEEPER.

"Who shall decide when doctors disagree?" In illustration of this adage we quote the following paragraph from a letter recently received from an able and highly-valued apiarian correspondent in the adjoining county of Dumfries:—"The past winter has been cold and changeable. We had occasionally severe frosts, but at no time in this county above an inch depth of snow. On the 14th December, the bees in hives exposed to the one-o'clock sun got all out and evacuated. Those shaded remained within and were obliged to remain till after the middle of March. The consequence, as might have been expected, was dysentery, and, in most instances, destruction."

Foul-breeding stocks should be isolated as much as possible in order to prevent the disease from spreading to others. Yours appears at present to be what Dzierson terms the mild and curable type. Take heed lest it degenerate into the virulent and incurable.]

HOUSEHOLD RECIPES.

SOILED CARPETS.—When soiled, carpets may be cleansed after beating with the following mixture:—Two gallons of water, with $\frac{1}{2}$ lb. soft soap dissolved in it, to which add 4 ozs. of liquid ammonia. This may be rubbed on with a flannel cloth, and the carpet then rubbed dry.

CEMENT FOR THE MOUTHS OF CORKED BOTTLES.—Melt together $\frac{1}{2}$ lb. of sealing wax, the same quantity of resin, and 2 ozs. of beeswax. When it froths, stir with a tallow candle. As soon as it melts, dip the mouths of the bottle into it. This is an excellent thing to exclude the air from such things as are injured by being exposed to it.

OUR LETTER BOX.

PREVENTING SWARMING (*An Amateur, Preston*).—Raising the hive on an cke 4 or 5 inches deep may prevent its swarming, or if the bees will work in a bell-glass it may have the same effect. Payne's improved cottage-hive is good and cheap, and may be obtained of Messrs. Neighbour. Buy "Bee-keeping for the Many," price 4d., free by post from this office for 6d.

BEES OUTSIDE A HIVE (*Gardenia*).—The entire colony appears to have taken up its quarters outside the hive, and not merely thrown out a swarm as you imagine. During the middle of a fine day we should disperse and quiet them by the means of a little smoke, cut off the combs (keeping a sharp look-out for the queen), and fit them into a frame-hive into which we should then sweep the bees. If you cannot manage this, we see nothing for it but to destroy them in the autumn and appropriate their stores.

BEES—QUEENS, &c. (*J. M.*).—It is impossible to say exactly what amount of delay from bad weather or other causes may suffice to compel a virgin queen to lay eggs and thus become a drone breeder. On one occasion I knew impregnation deferred a month without injury. A month after the issue of the last swarm the presence of a queen may be ascertained by driving the bees into an empty hive and inspecting the combs. If sealed brood be found the stock is, of course, all right; if none can be seen it is, probably, queenless. If you cannot drive bees you may, perhaps, obtain a sufficient insight into the state of affairs by simply turning up the hive and dispersing the bees by means of a little smoke.—A DEVONSHIRE BEE-KEEPER.

CANARIES (*P. Cater*).—We conclude from what you state, that either the weather is too cold for your Canaries, or that the other birds do not allow them to feed. We would recommend their being taken out of the aviary and removed to warmer quarters, and that their food be hard-boiled eggs, bread, and canary seed, with occasionally a little hemp, mawseed, and green meat. We presume you supply the birds with plenty of sand in the aviary.

WEEKLY CALENDAR.

Day of Month.	Day of Week.	JULY 19—25, 1864.	Average Temperature near London.			Rain in last 37 years.	Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock before Sun.	Day of Year.					
			Day.	Night.	Mean.									Days.	m. h.	m. h.	m. h.	m. h.
19	Tu	Cotton Thistle flowers.	72.8	51.0	61.9	21	8	4	5	48	51	7	27	4	○	6	0	201
20	W	Spear Thistle flowers.	72.5	51.1	61.8	22	9	4	3	8	24	8	48	5	16	6	3	202
21	Th	Sun's declination 27° 24' N.	73.1	50.6	61.9	16	10	4	2	8	53	8	11	7	17	6	6	203
22	F	Crested Dog's Tail Grass ripe.	73.4	51.8	62.6	21	12	4	1	8	19	9	34	8	18	6	9	204
23	S	Bardock flowers.	74.0	52.7	62.3	19	13	4	0	8	45	9	55	9	19	6	10	205
24	Sa	9 SUNDAY AFTER TRINITY. [1797.	72.5	52.2	62.4	13	14	4	58	7	12	10	13	11	20	6	12	206
25	M	St. JAMES. DUCHESS CAMB. BORN.	73.9	49.7	61.3	10	16	4	57	7	41	10	after.		☾	6	12	207

From observations taken near London during the last thirty-seven years, the average day temperature of the week is 73.2°, and its night temperature 51.3°. The greatest heat was 92° on the 26th, 1844; and the lowest cold, 36°, on the 21st, 1862. The greatest fall of rain was 1.37 inch.

THE ANÆCTOCHILUSES.



THESE deserve more attention than is bestowed upon them; for well do they merit the title of gems of the vegetable kingdom, from the contrasts in the colour and exquisite markings of their leaves. As exotic Orchids they require at least a stove temperature, in which with proper treatment they thrive well, though there is a general impression that they are very difficult of culture. To this cause alone can I attribute the want of specimens of this genus in almost all stoves; certainly it is not in the prices charged for them that the cause is to be found; and I think that with a greater acquaintance with their real habits, and a certain, and by no means difficult,

mode of treatment they may yet be brought into more general cultivation.

Perhaps the only plants under cultivation which have to submit to an unvaried treatment the whole year through, save, it may be, an increase in the minimum temperature during the summer, are those of the genus *Anæctochilus*. Instead of potting these plants as occasion suits, and then placing them under bell-glasses, there to remain an indefinite period, I advise a certain routine of treatment to be observed annually, the heads of which are here given, having myself had proof of the attendant success.

TIME OF POTTING.—All the plants, both large and small, should be fresh potted each spring, as, whether they require pot-room or not, and even when they are apparently doing well, it will at all times, in consequence of the moist state in which they are kept, be well to put fresh and sweet material in the room of that in which they have remained all the winter, and which must have become more or less soured. They will thus be assisted in making a good growth during the summer. The time of potting them must depend entirely upon that at which the house, whether a stove or Orchid-house, in which they are grown begins to receive its summer treatment; at no time would I pot them until a temperature of at least 75° is attained. This, perhaps, would be about the beginning of March.

COMPOST AND MODE OF POTTING.—The material in which I have found them thrive best has been a mixture of two parts of sphagnum, two of silver sand, and one of broken potsherds. The sphagnum, being finely-grown pieces separated from the more minute and dusty remnants, should be well chopped into small pieces; but previously to this, it, as well as the sand, and even the potsherds, should be well washed with clean water. This to some may not appear necessary, but I hold it to be an

essential to success. These materials should be well incorporated together.

I prefer a shallow pan to a pot for growing them, and when possible it should correspond with the size of the plant; or if a specimen-pan is required this should be of the size to which it is desired to grow the specimen, taking care that it match the bell-glass which is to be placed over it. The glass must at all times be kept over the plants. This I prefer to a mode often practised—that of plunging the pan into another, upon which the glass is then placed. The drainage should be abundant, taking care to place a thin layer of sphagnum upon its surface to prevent the sand from passing down.

The compost having been then placed very firmly in a conical form in the pan, the plants should be planted carefully over the surface.

Where the creeping rhizomes have rooted pretty freely they can be firmly embedded in the compost, otherwise a stem without roots should be firmly pegged upon the surface only. Give the whole a liberal watering with a light rose, slightly shaking the heavier drops of moisture from the leaves before the bell-glass is placed over them. A shady warm corner will be the best place for them for a fortnight, taking care if the weather be very bright the first day or two after potting to place over them, in addition to the customary shading, a thin sheet of paper.

PROPAGATION.—The most ready way of propagating them and that generally practised is by division of the creeping stems when of sufficient length, which will be about midsummer; this period, about the middle of their growth, being the best time. The stem may be severed by a sharp knife into as many pieces as will insure to each piece so severed two distinct roots, each having more or less hold of the soil below the surface. The plants so divided should be encouraged by a continuation of the summer treatment recommended below until the following spring.

SUMMER TREATMENT.—When the plants have become more or less established under the bell-glasses after the shift, a frame should be procured sufficiently large to admit the whole without undue crowding. It should be high enough at the back to allow of the pans being elevated upon pots. Three small 60-pots to each will be best, as thus the outer air will be more readily admitted through the apertures at the bottom of the pans amongst the crocks. The air will prove very beneficial to the plants, especially when the roots have struck well down amongst the crocks. No better position could be found for the frame than upon a side stage over the pipes and not too far from the upper glass. The plants will be better of being kept close for a day or two, after which the system of treatment I advocate during the summer, and which seems so beneficial to them, may be commenced.

This consists in taking the glazed light away from the frame about ten o'clock every morning, and giving the whole a moderate watering overhead with clear tepid water; just brush away from the axils of the leaves any heavy drops, leaving them then fully exposed to the

atmosphere of the house until the plants have become thoroughly dry, when the lights should be returned, shut down close, and allowed to remain so until, at the same time next day, the treatment be repeated. Should the surface of the soil be disposed to green over, remove carefully the worst, adding afterwards a slight surfacing.

The *Anectochilus* already number upwards of thirty, of which superior as ready-growing are, *intermedius*, *Lowii*, *Lobbi*, *superbus*, *Veitchii*, *striatus*, *argenteus pictus*, *setaceus*, and *setaceus albo-marginatus*.

W. EARLEY, *Digswell*.

INTENDED STRAWBERRY FETE

AND BOUQUET EXHIBITION OF THE ROYAL HORTICULTURAL SOCIETY.

THESE were wished to be on the 13th inst., but proved entire failures. There were twenty-five classes with corresponding prizes for Strawberries, but only entries in seven of the classes, and it may be said there was no competition in them, for ten prizes were awarded, and of these Mr. Lydiard, of Batheaston, near Bath, received seven! The heaviest single Strawberry was a British Queen, from Mr. Lydiard, weighing 1 oz. 8 dwt.; the heaviest twelve Myatt's Eleanor, also from Mr. Lydiard, 12½ ozs.

Then it was announced that "arrangements would be made by which it was hoped that Fellows, &c. (and others?) might be able to purchase a supply of the different fruits exhibited;" yet it surpassed belief at the time, when it was announced on the first day, that all the fruit that could be purchased came from Mr. Solomon and Messrs. Webber, the fruiterers in Covent Garden, and that if you bought the fruit you could not have it until the day following! Did not the managers know that freshness is essential to excellence in Strawberries?

The exhibition of bouquet-holders was equally defective. The very beautiful one presented to the Princess of Wales by the Maharajah Dhuleep Singh, was kindly sent for exhibition by Her Royal Highness, and there were eight or ten others in a glass case, but no one knew anything about them, nor did any one seem to care. If prizes had been offered for the most tastefully arranged bouquets, some interest would have been excited, and they would have been more consonant with the objects of a Horticultural Society.

CULTIVATION OF THE MELON.

(Continued from page 23.)

WATERING AFTER THE FRUIT HAS SET.—When the fruit has set and begun to swell water will be needed once or twice a week, or it may be every other night, so as to keep the soil in a moderately moist condition; and in addition to this a watering, which should be given about two o'clock in the afternoon in April, or if earlier in the season in the morning, and after April at the time of shutting up the frame, let that be when it may, so that the plants may not only feel the refreshing influence of water at the root, but that of a moist atmosphere, such as is produced naturally after a shower. They should be lightly sprinkled overhead daily at the time of shutting up the frame on the afternoons of hot days, to create a moist atmosphere, presently to be cooled down by the cold of night, thereby producing a kind of artificial dew to repair the waste in the day, and reinvigorate the plants. This sprinkling overhead should not be practised in dull, cloudy, or rainy weather, nor should the watering be then so plentiful; but at the same time it is necessary to have the soil in a moist state whilst the fruit is swelling; three gallons of water at the same temperature as the frame being sufficient to apply to one light at a time. Whenever water is given, or the plants sprinkled overhead, care should be taken not to wet the stem or centre of the plant whence the branches radiate, or the stems will very soon decay at that part. The soil beneath the centre of each light should be slightly elevated above the rest of the surface, so that water may be carried away from the stems of the plants, and a space a foot in diameter, which is supposed to contain the stems of the plants, in the centre of each light, should never be wetted more than can be helped after the bed is earthed.

When the fruit begins to net water must be supplied rather less copiously, still keeping up a moderate moisture in the bed and atmosphere; but when the netting spreads to nearly every part of the fruit, cease syringing or sprinkling the plants overhead, and diminish the supply at the root to one-half what it was when the fruit was swelling. After the fruit has become netted all over desist altogether from watering the surface of the soil, and unless the foliage begins to show signs of want of water, no more should be given until the fruit is ripe; but if water be absolutely necessary to keep the foliage in good order, it must be given by making holes in the soil and pouring water into them through drain-pipes, for a dry atmosphere is essential to the perfection of the fruit. The soil even when the fruit is ripening should be in such a state of moisture as to cause the fruit to ripen fully. Watery and insipid fruit is the result of a moist atmosphere; but dryness induces richness of flavour, yet too dry a soil affects the juiciness of the fruit. Too much moisture in the atmosphere, also, at the time of ripening, with a wet soil, causes the fruit to crack, especially if accompanied by a low temperature. The soil, therefore, should only be kept moderately moist after the fruit begins to net, and the atmosphere cannot be kept too dry if fruit is desired that needs no sugar to make it fit to eat.

TRAINING.—It is presumed that the plants were stopped prior to planting out, and supposing them to be stopped at the second rough leaf, they will each push three or four shoots, one from each of the rough leaves, and generally one from each of the bases of the seed-leaves, and these shoots do not spread much before they push laterals. These laterals, if left, overcrowd the neck of the plant; but as we are not certain that the shoots on which we are depending to produce fruit will do so, it is advisable to retain two or three laterals on the two shoots that spring from the base of the plant, and such laterals should be stopped at the second leaf. The first and third lateral of every alternate principal shoot should be cut away close to the shoot from which it takes its rise, the intermediate shoots having the first and third laterals retained, the second only being cut away. The laterals retained to supply the place of the principal shoots should these not set their fruit, or in order to supply shoots for a second crop, should be stopped at the second leaf, so as to throw as much support as possible into the principal shoots. These will grow rapidly and continue to throw out laterals as they advance, each of which must be stopped at the second leaf, and this stopping will again cause the sap to flow freely into the principal shoots. These should be trained at equal distances apart towards the front or back of the frame, according to their position; the distance between them should be 1 foot. We have now only to cut clean out every alternate lateral for 1 foot from the lateral left at the base of each principal shoot, stopping those left at the second leaf unless fruit be shown, when they must be stopped at the joint above the fruit, but not until the flower has been properly impregnated and the corolla has closed. By the time these laterals push sub-laterals the principal shoots will be advanced to within 6 inches of the sides of the frame, when we stop them. This will induce laterals, and on these and the laterals already stopped, now pushing sub-laterals, we expect fruit will be shown in sufficient numbers to warrant our keeping the atmosphere dry for a time, to facilitate the setting.

The proper number of fruit on a plant is two at an early period of the season, or later on when large fruit are required; three after April, to afford full-sized fruit, and as many more as desired, only no one need expect to have on one plant six Melons equal in size to those on plants producing two or three. It not unfrequently occurs that the laterals retained near the stem of the plant show fruit, in consequence of the frequent stopping, before those on the principal shoots do so. Some make a practice of taking such fruits away, the reason being that if they should set they will require moisture for swelling, and that if not supplied with it they never attain any size, whilst if moisture is supplied on their account it endangers the principal show of fruit. Though it is preferable to have the flowers open at nearly the same time, yet I do not consider it wise to miss a couple of fruit on a plant, though it be the only one in a frame that shows so early, for fruit formed early near the

stem invariably swell the best, and are the most handsome. It should, however, be borne in mind, that it is very undesirable to treat such fruit as if the principal crop were to be subordinate to them. Many cultivators of the Melon, however, consider that an early fruit, or one in advance of the rest, prevents others from setting freely, if at all; or if these do, they seldom attain the perfection they would were there no fruit in advance of them. This opinion I must say is also in accordance with my own experience, but I never could resist the temptation to get fruit set as early as possible; and from plants in different stages in the same frame, I have had fruit insipid in one case, and excellent in the other. It is desirable, therefore, to have the fruit set as nearly at the same time as possible, and though we have provided for this, it may happen that the plants do not show fruit so freely as we could wish, or if they do they do not set. I have said before, and I now repeat it, that the bottom heat should be brisk (80° to 85°), and a dry atmosphere with a change of air daily must accompany the setting. With these conditions secured, the soil moist and firm, the plants not far from the glass, and strong, short-jointed wood, there is no difficulty in the matter. After the fruit is set provide a piece of blue slate or tile, and on this stand the fruit, which will prevent the side next the earth rotting, and to a great extent its not ripening on that side. I have tried glass, &c., for keeping the fruit from the damp soil, but have found nothing equal to pieces of common roofing slate.

PRUNING.—Pruning the Melon after the fruit is set is confined to stopping all growths as fast as they appear to two leaves, so as to throw as much support as possible into the fruit, which will swell rapidly, and in order to insure its doing so, all the leaves should be retained, except such as are yellow. After the fruit begins to net, a few of the small shoots should be cut in closely so as to admit more light and air to the fruit; but do not remove the large leaves, for on them depend the size and quality of the fruit. After the fruit is set and swelling all pruning, therefore, should be limited to thinning-out the useless wiry shoots that spring from the principal shoots or laterals, and to keeping those left above the fruit stopped at every second leaf, so that neither the wiry shoots nor those above the fruit may rob the principal leaves of their due share of light, air, and nourishment. Some make a practice of cutting away most of the laterals after the fruit is set, but retain a growing point above the fruit, and it is stopped repeatedly at every two or three eyes. This is a first-rate system if the principal leaves can be preserved in a healthy state until the fruit is ripe, and when no second crop is desired from the plants; but should the leaves be scorched or attacked with red spider or thrips, the fruit does not attain that perfection it would were there leaves in a healthy state to elaborate the food absorbed.

When the fruit approaches maturity the greater part of the laterals and leaves, with the spray-like shoots above the fruit, should be removed, retaining, however, any healthy large leaves that may be on the main shoots for a short distance each way above and below the fruit. These will be sufficient to attract and elaborate the food necessary for the maturation of the fruit, whilst the removal of the spray-like shoots with their small leaves will admit more sun heat and air, and materially improve the flavour, giving a richness that renders sugar unnecessary. The fruit may now be elevated on an inverted flower-pot, still keeping the slate beneath it, for if it be placed on the pot without the slate, the steam of the bed or moisture rises and keeps the under side of the fruit wet, and may cause decay there. This raising the fruit nearer the sun completes the ripening, and heightens the aroma.

RENEWING GROWTH.—Should the plants appear disposed to grow vigorously after the laterals are removed, and a second crop be desired, choose four or five of those that are near the stem of the plant. Give no water, however, except enough to keep the plants alive, and in a rather healthy state. Trim away all other laterals except those bearing fruit, which will cause those left to take the extra sap, whilst the small quantity now needed for the support of the fruit will not deteriorate the quality in the least; but should extra support now be thrown into the fruit it not only injuriously affects the flavour, but is a direct cause of cracking. The fruit being ripe the old vines or principal shoots are cut

back, the bed watered, and the shoots retained for a second crop treated in the same manner as those for the first crop. It is of little use attempting to obtain a second crop unless the fruit is ripe in July, or sooner, so that a good plant can be preserved, and the fruit can be set in August.

ANOTHER MODE OF TRAINING.—The most simple and most generally-adopted system of training Melons in dung-beds is to stop the plants at the second rough leaf, and then allow them to grow for a fortnight or so after planting-out, by which time they will be well furnished with shoots. Four or five of the strongest shoots are then selected, and spread out at equal distances, with their extremities pointing towards the sides of the frame, care being taken not to cross the shoots of one plant with those of its neighbour, one plant being taken to the back, the other to the front of the bed. Then cut clean out the spray shoots that cluster round the stem, which should at all times be kept free both of these and leaves, as they prevent the circulation of a due amount of air, and cause weakness, canker, or gummy exudation at that part of the plant, resulting in the death of the plants before the fruit attains maturity. The shoots are encouraged by taking away the small worthless shoots near the stem, and are trained from 9 inches to a foot apart. When they reach to within 6 inches of the sides of the frame their points are pinched off at a leaf. This causes the production of side shoots or laterals, and on these blooms appear nearly simultaneously throughout the frame. The atmosphere is kept dry, the flowers are duly impregnated, and by these means, with a brisk bottom heat, the setting of the fruit generally takes place. When that is effected a piece of slate is placed under each fruit, the shoots are kept rather thin by cutting out the weakest, and stopping the strongest, so as to cause support to pass into the fruit, and a good root-action kept up by the formation of new growths. The shoots are repeatedly stopped and thinned after this, so that the principal leaves may not be prevented from duly performing their functions for want of light and air, nor robbed of support by a quantity of useless small shoots. This is all the training given in many cases, and I can vouch for large and fine-flavoured fruit being obtained in this way.—G. ABBEY.

(To be continued.)

MY ORCHARD-HOUSE.—No. 5.

“**EHRE FUGACES!**” How swiftly fly the precious moments! Let us employ them well. It seems but yesterday that I saw my Peach trees in bloom under a canopy of snow, so thick and heavy overhead as to make it seem twilight instead of a February morning. Conspicuous among them was the Honey Peach, with its lovely rosy blossoms, so unique that any one could recognise the variety at a glance. And already we are gathering the fruit! Ever since the beginning of the month we have had fine ripe Early York Peaches, generally 8 inches round, and well coloured. This is what the orchard-house does for us—it hastens the ripening, and secures us a certain crop; it also enables us to grow delicate varieties of Peaches and Nectarines, which would never thrive out of doors. But to my mind, its great value lies in the succession of ripe fruit which can be obtained by a little skill.

It is worse than useless to grow Peaches for a six-weeks season. In favourable seasons many are wasted, and this noble fruit degenerates in value from its very abundance, while in cold and wet seasons there are not only very few, but these do not last. Now, in the orchard-house there is no need to dread these results. Unless, as it is facetiously said, there are none produced at all, there is no reason why we should not have a three-months Peach-season, not to speak of Plums, Cherries, Apricots, &c. Three months constitute a large portion of the whole year, and if we can secure any particularly valuable fruit for this length of time it is saying a great deal in its favour. Orchard-houses do this—first, by ripening fruits early in themselves, and by making them earlier still; then by hastening midseason varieties, so that the same kinds on the wall shall come in directly afterwards; and lastly, by producing late fruits such as the open wall cannot be expected to ripen at all. This has been our regular practice, and from July to November it is easy for our numerous visitors to judge for

themselves. A large portion of the fruit is sent to Covent Garden Market, though the house is not organised for the sale of the produce by eliminating valuable but not prolific sorts, and it is really painful to see the gorgeous varieties sent to an indiscriminating public, and to rapacious dealers. What would these care for tropical Peaches—rare sorts imported by Mr. Rivers, and carefully selected and sent to me as a favour by him? The public has much to learn still about the trouble these things cost the producer. Judging from the average knowledge of our visitors, I should say about one-third do not know a Nectarine from a Peach when they see it. We find, too, that many who themselves cannot grow even common things, are much disappointed unless the orchard-house is literally breaking down with the weight of early Peaches. As if anything early is ever remarkably fine or prolific! There is undoubtedly great ignorance about these matters—not that we know much more ourselves as yet, but orchard-houses are excellent instructors; even for that reason they should be built.

One thing orchard-houses do teach, and that is not to overwork the trees. I believe that the poor things, if called upon for the credit of the house, would risk any amount of vegetable vitality. I once put it to a favourite diagonal cordoon to show visitors what we could do working sympathetically together. I was to prune scientifically, to water carefully, and to feed it well; besides, abundance of light and air was to be provided for it. It then engaged to do its best, and being young had no thought about consequences. The result was one hundred and twenty fine Early Newington Nectarines, but the poor diagonal has never been quite well since. It occupied about 30 square feet of the back wall, making thus four Nectarines per square foot.

To prove what I advanced before—that orchard-houses have the valuable quality of hastening the period of ripening fruits as years advance—Early York, ripe August the 1st in 1861, was ripe on the 23rd of July in 1862, while this year it is as early as July 4th. Canary, ripe July 23rd in 1862, was ripe on July 20th, 1863, and July 11th, 1864.

As to produce. This year we have 1200 fine fruit, Peaches and Nectarines; about 100 Apricots, and a fine promise of Figs; a few Plums, no Cherries, having no room to spare; but I see them growing well in my friend's houses. We have also, along the rafters, about 100 bunches of Grapes. All this produce is first-rate in quality, and would be much greater but for the variety of trees growing, many of which, though good, are not prolific. These are retained for the sake of experiment, but will ultimately be condemned.

The weather has again changed, and become warm, and there is much lack of moisture. Our tanks are sadly tried, and I have no doubt that watering is a sad toil to many just now. Syringing is freely kept up; and we always syringe, even when the fruit is colouring. The practice is condemned by some; but I must confess that the reasons given do not seem very sound. At night, especially, how does syringing affect the flavour of fruit more than a heavy dew?

As to ventilation, it seems in July and August as if no amount of openings can be sufficient. The atmosphere is at times inconveniently close and unwholesome, do what we will. This must affect the vitality of the trees, especially if at all crowded. At any rate we find that the red spider abounds, and does most injury in trees placed in corners, where the draught does not affect them. In the same way, branches and shoots in dusty or neglected places are sure to become a prey to insects.

The shoots on the Peach trees have now elongated considerably, and, if destined to prolong the branch, have even required to be stopped freely. It is well not to do this too early in the season, unless the tree is bare at the lower portions. By allowing them to extend and strengthen first, the tree will much benefit in general vigour. As to those destined to be fruit-bearers, we have already discussed three classes of them. There remain now only two more classes, and these I shall briefly notice. The first of these two is a shoot composed in nearly equal proportions of fruit-buds and of wood-buds, the latter, of course, nearest the stem. If out of doors, in the winter cut above the second triple bud; but if in the orchard-house, at the summer pruning pinch in to four well-coloured leaves at the first pinching-in.

The other class are very vigorous and long, composed

chiefly of wood-buds, perhaps a few fruit-buds near the summit or point of the shoot. Out of doors, in winter, cut in to two buds close to the stem, to produce two new shoots next season. In-doors, if you recognise these shoots clearly, and do not require them to fill up, then pinch back very short—to two leaves. At any rate, be much on your guard against these shoots; they are not useful, nor productive, and may become very gross and rampant, absorbing sap and doing no good with it. Should the close summer pruning be early, by having discerned their nature in time you will probably obtain two weaker shoots from the two eyes left, and these may ripen too, and bear. However, by pinching in to four well-coloured leaves when the summer shoot has had time to be sturdy, and not before, and then to two leaves the second growths, as soon as these are pretty sturdy, the third growths may be pinched in closely any way. The leading branches to be allowed to gather strength before stopping them also. This is the easy science of in-door Peach-pruning. Summer laterals (*anticipés* in French), to be pinched in just above the first pair of leaves. But these also should be allowed to make a little growth, or they may shrivel up. This is the chief secret—close summer pruning in, but not too early in the season.—T. COLLINGS BRÉHAUT, *Richmond House, Guernsey.*

NOTES FROM PARIS, 1864.

ROSE LORE.

To me there is no greater treat connected with a trip to Paris than a few hours' chat with my good friend M. Margottin, of Bourg-la-Reine. I am always sure to get information, and reliable information too, on many points connected with the Rose. And then he is such a thorough enthusiast—and one does like an enthusiast, for it implies earnestness—and the Rose has been so especially his flower, he has given so much time and thought to it, that he is not a mere Rose-grower or Rose-seller, but also a Rose-lover. He will discard Roses which some other growers would send out with high-sounding names and descriptions; and hence there have been comparatively few Roses sent out from his establishment which we can well do without, while Jules Margottin and Louise Odier will be grown as long as Roses are grown. Some people say he is bigotted in his opinions. I dare say he is, and he has a right to be; for if a man knows a subject thoroughly, if he has grasped it in all its proportions, he must be necessarily in the eyes of others, when he maintains views and opinions which he knows to be right, considered as such. In a very old book I find it written of one, "Unstable as water he shall not excel," and so with those who are readily moved by what this or that person says; but I am bound to say I find a good deal of good honest common sense in all he says, and were he on our side of the channel I should call him a thorough John Bull.

We had, then, on that bright sunny day after the thunder-storm of the 9th, which had so much damaged his bloom, a good chat as we went amongst his fine stock of standard plants. The hybridising of Roses came up on my asking him his opinion of John Hopper, which he pronounced a grand Rose, and telling him he had something to say to it, as it was a child of Jules Margottin; he then stated what I was before unaware of—that he, at any rate, of the French nurserymen, does not trust to the chance hybridising of insects, but that he has for years regularly crossed some of his flowers. At the same time he does not seem very much enamoured with the results, and thinks he has perhaps done as well where he has not done so. He found, as most have done, that strange freaks are played in this matter. As my friend Mr. Standish has found that from two white Grapes he has produced the very blackest Grape he knows, so from two red Bourbons he had obtained a fine white, of which he had entertained great hopes. He had grown it for several years, and he then determined on propagating it for sale. But alas! it would not then open well, and so he discarded it; for, as he justly observed, a Rose that will not open well in France is sure not to open well in England. The Bourbon Rose which he sent out this season named Reverend H. Dombrain, was a seedling from Louise Odier crossed with Général Jacqueminot; and as I saw it there it

combined the qualities of both parents, the shape of Louise Olier and the colour and perfume of the Général. Then, again, his seedling Duchesse de Montpensier, raised by him in 1845 and sent out in 1847, was a seedling from Madame Laffay and Mrs. Bosanquet. Duc de Cambridge, again, was a seedling of Madame Fremion raised by him in 1850; while Jules Margottin, probably the best and most useful Rose he has ever produced, was a chance seedling, and the plant did not bloom for six years. From this Rose he has a seedling to be let out this year, very bright and clear in colour, and of large size. He had, he tells me, crossed Persian Yellow with a rose-coloured Hybrid Perpetual, and obtained a pure white Rose; but this never opened, and all his efforts in this direction had been frustrated.

The immense number of red, scarlet, and crimson Roses annually sent into the market, and their great similarity one to the other, was also commented upon. In excuse of the French raisers, he said that there being no such competition as in England, raisers knew very little of what they each were doing. One man at Lyons, another at Caen, another at Abbeville, another at Angers, raise a very fine Rose. It is good—seems to them, at least, magnificent; and hence it is “put into commerce.” All come over here; and when they bloom with us, alas! it is the old story of treedledum and tweedledee. In truth, he says, ever since the introduction of Général Jacqueminot the rise has been all in that direction; and he has now determined to, in sporting phrase, “try back.” He has a number of Roses planted under sashes, and these of varieties which were sent out before Général Jacqueminot, and he hopes from these to obtain something novel. When I was there the pips were already well swollen; so that, doubtless, with a fine summer he will secure a good crop of seed. Concerning the Général, he told me that it was obtained by a M. Roussel, at Merdon near Paris, who had for thirty years been seedling from Gloire de Rosomène, convinced that some day or other he should obtain something good from it. When on his deathbed, he told his gardener (Roussel) that he had not much to leave him, but he would give him all his seedlings, and that if he managed well he would soon make his fortune. That very year Jacqueminot bloomed, though its raiser never saw it, and in 1853 was let out; but Master Roussel was too fond of his glass and did not make his fortune. Géant des Batailles was raised, I believe, near Lyons, by an amateur of the name of Nérard, who in the same way for many years had been saving seed, convinced that he would obtain something good. It was sold to Guillot and by him let out. Margottin said he had not been any more successful than others in striving to introduce other blood amongst the present race of Roses. He had tried to hybridise with the microphylla Rose, but never could get anything worth keeping.

Concerning some of the newer Roses, also, we had some interesting conversation. I do not at all find him disinclined to acknowledge the merits of the flowers of other raisers. He pronounced François Lacharme and Charles Lefebvre to be the best two Roses in their class. Monte Christo comes sometimes very fine; but those Roses described by French raisers as nearly full are very disappointing. You imagine you are going to have a fine bloom; it looks beautiful, colour excellent, but it has hardly expanded before the eye shows itself. This is the case with Peter Lawson, Vicomte Vigier, Mdle. Julie Daran, and many others—splendid when you can catch them in the bud, but very soon disappointing your hopes and expectations. Beauté Française he pronounced to be too like Léon des Combats, as I have myself since proved it to be in my own garden. John Hopper, as already said, he pronounced to be a first-rate and distinct Rose. Baron de Rothschild he also thought, as we have found it here, excellent, and Le Rhone also.

With regard to new Roses, M. Eugène Verdier purposes sending out six this season. Of these the finest are Rev. F. Radclyffe, named in compliment to the Vicar of Rushton—a Rose of the Madame Victor Verdier class, but very bright and clear in colour; and Maréchal Niel, a very fine Tea Rose, said to be a seedling of Lamarque, very vigorous, free-flowering, and clear in colour. It is not absolutely new, as it was raised somewhere in the provinces, but is very little known. His other Roses were only under figures, and therefore to say aught of them now would be of little

use. M. Charles Verdier has two of his own raising of which he speaks highly; while Levêque has at present one. Margottin has one, certainly not yet named; and another, a white, of the shape of Madame Rivers, but pure white. Of this he is not certain, and waits to see how it is this year before offering it for sale. Marest is also said to have one. This is all I could hear or see of Paris Roses. Mr. George Paul, who had the kindness to find me out in Paris, went further south—to Brie, Fontainebleau, and Lyons, and has doubtless notes of what he saw. I am inclined to think that French raisers generally are awakening to a sense of what they have put on English growers; and I am hopeful there will be more caution in selling, while I am quite persuaded there will be more caution on this side in buying.

And now adieu to Roses, and flower shows, and gardens for a while. Ere this is in print I shall be off to the wilds of the far west of Ireland, engaged in other work than this, and in revisiting the scenes where many a happy day was passed—feeling, I dare say, how like a dream life is, and how impossible it is to conjure up the feelings of past days even in the midst of those scenes.—D., Deal.

A PANELLED LAWN.

A few days since I saw a beautiful variegated, or, rather, almost white, grass, suitable for lawns. I think that a lawn planted with such grass, or worked into panels or ribands with green grass, would have a very fine effect. Has the plan been tried anywhere?—JNO. CLAYTON.

[Is the grass a dwarf variety of the Gardener's Garter (Phalaris)? Whether or not, we do not think it would be effective ribanded with other grass alone; but it might make a good edging to flower-beds, with the grass lawn round. We should like to see a piece of the grass, and then we should be better able to give an opinion.]

BLACK PRINCE GRAPES.

ALLOW me to correct an error you have allowed to creep in with regard to the weight of our Black Prince Grapes, page 26 last week's JOURNAL OF HORTICULTURE. Your weights of the four dishes in the previous week's Journal were perfectly correct, page 5. The weight of the heaviest dish was 13 lbs. 10 ozs. The centre bunch weighed 5 lbs. 7 ozs. The heaviest dish previous to this was shown June 24th, 1863, at the Royal Botanic: the three bunches weighed 9 lbs. 5 ozs.

The whole of the Black Prince Grapes exhibited from here for the last four years are from grafts on the Frankenthal, not Mill Hill as mentioned this week. The first dish was exhibited on the 5th and 6th of June, 1861, on the opening of the Royal Horticultural Garden, and weighed 8 lbs. 14 ozs. I find the Frankenthal the best of all stocks for grafting, and the Barbarossa the worst.—W. HILL.

[We shall be glad if our readers will furnish us with the heaviest weights of Black Prince they have met with.]

PEACHES UNDER GLASS AT BRADFORD.

THERE has been much said about growing Peaches, &c., between Mr. Abbey and some others of your readers, and a slur was cast upon all the gardeners about Bradford and its neighbourhood. I have been in my present situation nearly twenty years, and I have grown good crops of both Peaches and Grapes. If you look in THE COTTAGE GARDENER for December 23rd, 1852, you will find an article by Mr. W. Dobson, entitled “Grape Forcing, good specimens of.”

Our place is as black as possible; for, about half a mile north of it, there are some chemical works; three hundred yards to the north-west there is a brickyard; and I have had to close the houses at midday when a kiln of bricks has been burning, or else the sulphur would have destroyed all in the houses. Then, from west by south to east, lies Leeds, a town, I should think, as black as any in England—nothing like it in Herts. The houses are all close to the garden wall, and, except on the north-west, it is as black as anything you can conceive.

I send you a specimen of Peaches grown in the gardens of J. O. March, Esq., and I have had a good crop for the last fifteen years, except one season. The largest Peach was 12½ inches round, of the Royal George variety, the same as I send. The tree has no grand south border to grow in, but the roots are under a path 4 feet wide. The sun shines on it about three hours in a day. There are Vines in the house as well.

If we poor soot-persecuted gardeners grow fruit like that I send, what ought our more favourably-placed brethren to grow, with their pure air and fine soil—for ours is nearly clay—with good leaf earth? Nothing will grow in our leaf mould; it seems to poison everything.—J. ACOMB.

[The Peach sent was a very fine specimen 10½ inches in circumference, weighed fully 9 ozs., was highly coloured on the most exposed side, fully ripe, and of good flavour.]

WHITE HELLEBORE VERSUS GOOSEBERRY CATERPILLARS—BIRDS.

It is all very well for your Yorkshire correspondent to talk of his Gooseberry trees being free from caterpillars, and to give the credit to the birds. Birds abound in my garden, and caterpillars would abound too unless means were taken to prevent it. There is an easy cure for the Gooseberry caterpillar, and a certain cure if it be only rightly used, and that is hellebore powder. Some will tell you that hellebore does no good, and no wonder when it is used in the manner many do. They let their trees get half covered with the caterpillar, then sprinkle them with the hellebore, and think they have done what is necessary. They might just as well do nothing. The right plan is for a man to keep his eyes open, and so soon as he sees the very first signs of the caterpillar to dust all the trees with hellebore, and to repeat the dose in two or three days. Let this be done when the caterpillar first shows itself, and success is certain. But I repeat that all depends upon the remedy being applied in time. Many, very many, gardeners spoil their work in this and other things for want of being soon enough. They are constantly too late, and you will see them locking the stable door long after the horse has been stolen.

And now for a word about "the birds." They are very pretty to look at, and it is very pleasant to hear them sing; but, notwithstanding, I would rather have their room than their company. I am told they do much good. It may be so, but I am sure they do a great deal of harm. While the good in my judgment is problematical, the mischief is manifest. In the matter of fruit, birds are the greatest possible nuisance. It is impossible to keep any fruit from them without nets, and not seldom they will have it in spite of nets. It is fortunate that orchard-houses help us here as well as in other points. I am glad to say that my orchard-houses are again full of fruit this year, as they have been for the last eight years, notwithstanding that I live so far north as—NORTH LANCASHIRE.

FURZE versus GOOSEBERRY CATERPILLARS.

As regards the placing of Furze in a bush for the destruction of the caterpillars, I can say that I tried it in one bush which was much infested, and in a few days they had all disappeared, nor have I seen any one since on that bush, though plenty have made their appearance in other parts of my garden.—A. H. F.

GARLIC versus GOOSEBERRY CATERPILLARS.

HAVING noticed the discussion as to the prevention of the caterpillar by Furze, I think it may be interesting to some of your readers to know, that I was looking over a gentleman's garden in the neighbourhood a few weeks ago, and observing some roots of Garlic planted round the Gooseberry bushes, I asked the gardener what they were planted there for, and he replied, "To keep the caterpillars away," and he assured me it was quite effectual. This remedy may be worthy of a more extended trial, for Garlic is more useful than Furze in a kitchen garden, and it may as well be planted round the Gooseberry bushes as anywhere else.

Can you inform me if there has been published at any

time any alphabetical list of flowers with the different composts proper for them? Such a list on card in the form of a chart to hang up in the potting-shed would, I think, be useful to many amateurs, at least, I know it would be so to me and to all beginners. I have often thought of preparing such a list for myself, but could never find the time.—R. B. B.

[We know of no such list. A gardener would not require it, and an amateur would consult our "Garden Manual," or some other work if he had any doubt as to the formation of the compost.]

TAN versus GOOSEBERRY CATERPILLARS.

My Gooseberry bushes were much damaged by caterpillars last year; and as I read in your paper that the best remedy was to place a circle of tan about 2 inches deep under each tree, I have this season tried it with perfect success to the present time; and as the Gooseberry bushes in the garden adjoining mine are this year, although not, perhaps, so much as last, attacked by the same pests, I am glad to make known what I believe is a simple as well as effectual remedy for this evil.—H. M. GAMMON, Oxford.

BROOM versus CATERPILLARS.

If your readers will, as I have done for many years with perfect success, twist a good wisp of fresh Broom round the stem of each Gooseberry bush, so that no vermin can creep up from the earth except through the Broom, and see that it is properly twisted round and not a mere show, and that it is done just before the leaf-buds begin to open, so as to be fresh and bitter to its crawling friends, they never will be troubled with caterpillars.—J. MACKENZIE, M.D.

FAILURE OF SELAGINELLA DENTICULATA.

EDGINGS FOR CONSERVATORY FLOWER-STANDS.

IN an open colonnade here we have three semicircular stands exactly like those in the conservatory at Kensington. This is the second year we have had them, and as yet we have not been able to make the Lycopod (*Selaginella denticulata*) answer well for the edging. Do you think the following mode of treating it ought to insure success?

In March of this year I filled the wire baskets nearly to the top with good turfy loam chopped fine. I then spread the Lycopod all over the surface, and covered it thinly with finer soil, and placed the baskets under the stage in the greenhouse, where they remained until the end of June, when they were placed round the stands. The Lycopod seemed to be going on nicely up to that time, but since then it has begun to look worse. My opinion is, that the cause of failure may be attributed to the fact, that from the time the sun reaches the meridian until the time of setting, it shines full upon the stands. My employers have an idea that Mignonette would answer better than the Lycopod.—BOLNORE.

[The full exposure to the sun of the stands in the open colonnade is the reason why your *Selaginella denticulata* will not answer round the edges. It must have partial shade as well as moisture. Instead of Mignonette for such edgings, we would recommend a fringe of drooping *Anagallis*, or of *Verbena pulchella*. If the sides of the stands are of a white colour, dull them to a dark colour. After the creepers are all over it, the colour will be of less consequence.]

SALVIA ARGENTEA.

AMONG the many plants which are cultivated for the singularity of their foliage this is by no means the least remarkable. With a leaf as large as that of a Cabbage when fit to transplant, and of a thick and woolly texture, its appearance amongst other plants is singularly beautiful. In point of whiteness it is not equal to *Centaurea candidissima*, nor even *Cineraria maritima*, but it is possible by planting it in suitable soil that it may be improved in that respect; but in its dwarf sturdy habit, and thick blanket-like foliage, clothed with a long hairy down, it possesses features widely distinct from anything else that I am acquainted

with. It also possesses the merit of being of easy growth, and adapting itself to all situations. Although not an annual, it is most readily propagated by seeds, which are to be had of most seedsmen; and if sown early in spring the plants may ornament the parterre during the same summer, and a few plants retained in pots will look well all the winter when such plants are far from plentiful. In the following spring, most likely, it will run up to flower, though the plant is not improved by its doing so. The flower, which

is white, is by no means unsightly; in fact, it is prettier than one that came out some years ago as a great acquisition—namely, *Salvia patens alba*, for the flowers of *S. argentea* are individually larger than the other, and in colour and form equally good. I have never used it for bedding purposes, but for mixed borders a few plants introduced amongst other things give an aspect different from anything else I am acquainted with, *Stachys lanata* affording the nearest approach to it.—J. ROBSON.

HINTS ON ICE-HOUSES AND ICE-HEAPS, &c.

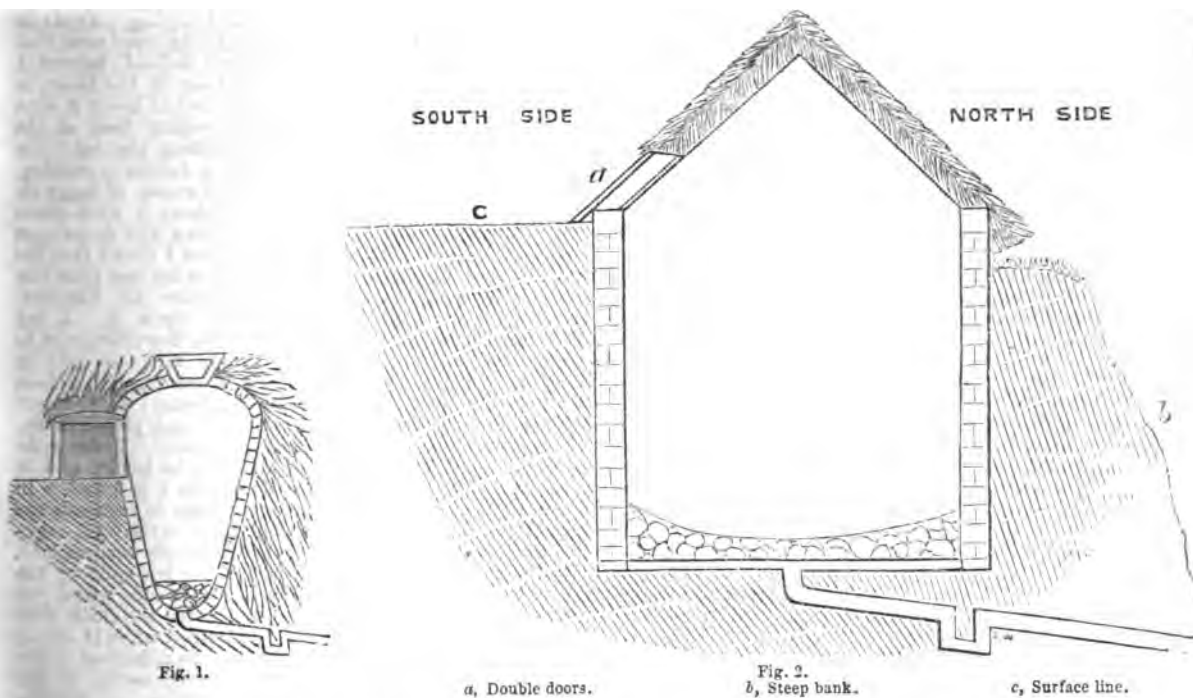
[HAVING recently had applications from some of our readers for No. 588, containing hints by Mr. Fish on the above subject, and that Number being out of print, we reproduce the greater portion of his article, with a few additional notes.]

ICE-HOUSES are generally made in the shape of an inverted cone, or an egg with the largest end uppermost, and a medium-sized house might be 8 feet in diameter at bottom, 11 feet at the widest part, and 14 or 15 feet deep from the bottom to the top. When bricks are used there is no difficulty in thus having it round; but I have no prejudice at all in favour of such a round house; but for all purposes would as soon have a square building, whether built of stone or wood, or any other material.

Fig. 1 is a section of the egg-shaped well as commonly

built, with a trap drain from its bottom, and the bottom covered over with logs of wood and rough brushwood for a depth of a foot or 18 inches. It is furnished with a passage and a door outside and inside, so that the space between them may be filled with straw. As will presently be seen, we prefer a double wall instead of a single one, with an open space between of from 9 to 12 inches. The opening shown at the top is of great importance for filling the well, where the position of the ground will admit of it. If a layer of clay can be rammed against the outer wall it will be an improvement. The ground around the well should be shaded with trees and evergreens.

Fig. 2 is a section of one of the simplest and best ice-houses I have met with. As far as I recollect, it was built square, with stone walls, 16 inches thick, enclosing a square



of 16 feet by 18 feet deep. One side abutted on the level of a field, and the opposite one on a deep sloping bank, the base of which was below the bottom of the ice-well. The ground being light the drain was of little use, as the moisture escaped at the bottom. The ice was carted along the level meadow to a platform at the doorway. There were two doors; the outside one was of stout deal, on hinges which enabled it to fold back on the roof. The corner one fitted loosely in a groove, and this door was lined with woollen cloth. Though these doors were on the south side of the roof, the ice never failed. The roof was formed of 12 inches of thatch, and then fully a foot of close heath or ling. The ice was pretty well beaten outside, pitched in at the doorway, and then pounded down inside. Nothing as a house could be more simple, or keep ice better; and, the ice being

taken from clean water, venison, game, &c., were kept in the house for long periods untainted.

In most of the old-fashioned egg-shaped houses there is a long passage leading to the well, with two or three doors, and, in many cases, the ice must be all carried in and out through that passage. With two padded doors, and a space of 15 inches between them, the long passage may generally be dispensed with; and, although the ice should be removed through these doors, it will always be an advantage to have an opening at the top for throwing the well-broken ice into the well. I have known several cases of severe illness as the result of men being kept for several hours in these long passages shovelling the broken ice past them.

Where dryness may be secured there need be no objection

to sinking the well wholly below the ground. In soils retentive of moisture care should be taken to prevent the outside moisture penetrating through the walls, by building them in cement, ramming clay round the wall, with tar next the wall, or raising them partly, or nearly wholly, out of the ground. It is quite a mistake to suppose that to keep ice well you have merely to get it into a hole beneath the surface of the ground. On an average the earth will be warmer all the year round at the depth of the bottom of the well than at the surface. All moisture getting to the wall would melt the ice; the moisture that would ooze out from a wall above the ground would actually cool the interior by evaporation.

I have not had any ice-houses entirely above ground under my own charge; but I have noticed how well the ice kept in several, though, as far as I recollect, half as large again as the size mentioned above. I remember one house above ground that was built with double brick walls, the walls being separated 12 inches from each other, with a door in each wall opposite each other, about 5 feet from the ground level. The top of the house, steep and cone-shaped, was thatched to the thickness of 18 inches, and extended beyond the walls for a couple of feet. The outside thatch got covered with mosses and lichens, and there was a dense shade of trees over all. A temporary staircase led up to the doorway, and a stone staircase inside led to the bottom of the house. The ice was pitched in from the carts, and broken inside, and it kept remarkably well. The great secrets in this case were the double walls and the enclosed space for air between them. Of all non-conductors of heat, enclosed isolated air is the best. Neither what we call heat, nor what we call cold, has the power, to any great degree, to pass through it. I recollect once noticing in the end of June the thermometer in the shade, against the outer wall of such a house, indicating 77°, and another thermometer on the wall inside the ice-well ranging from 32° to 34°, but we shut the doors behind us.

In sunk wells this double wall is just of equal importance. The outer one prevents the heat of the soil affecting the ice. I met with a nice example of this some time ago. An old-fashioned ice-well had been so built, and answered remarkably well. In course of time three or four ice-tubs had to be supplied at the mansion instead of one—everything in summer had to be cooled with ice—and the supply, from the house being opened so often, was not equal to the demand. The supposed genius of the establishment counselled the removal of the inner wall, which would at once make the house about 3 feet wider from top to bottom, and set at liberty so many thousand bricks for other purposes. What could seem more feasible? and accordingly it was done, and the house well filled the next winter; but the enlarged house was emptied fully six weeks earlier than it used to be before. Since then the waggon-loads of straw packed against the walls inside, and the trouble, would soon cost more than the double wall, and, after all, with far inferior results. Few things are better non-conductors than straw, especially if not much bruised by the flail or threshing-machine, as every space between the joints is, so far, a sealed-up air-tube; but let that straw get thoroughly soaked inside a house, and its non-conducting powers would not only be gone, but the vapour always rising from it would keep a damp fog always resting upon and melting away the ice. I have no faith, therefore, in straw as a non-conductor inside a house unless it be kept dry. I have a large house which, when filled, generally secures pretty well a two-years supply; that, too, had been built, I believe, with hollow walls, and the inner one was removed, before I knew it, to increase the size; but I soon gave up using packings of straw, having come to the conclusion that, on the whole, from getting damp it did more harm than good. When either a stone, brick, or wood house is raised partly or wholly above the ground level, covering the single wall, whatever it is, with from 6 to 9 inches of straw neatly fastened on the outside, and with the eaves of the roof projecting far enough to keep that straw dry, will be the best substitute for a double wall; and if the ears of wheat are removed, so as not to entice birds or mice, the straw will last a number of years.

Thus by using hollow walls, or a non-conducting medium, it will be seen that regular ice-houses may be as well, partly or wholly, above ground as below it; and in the

circumstances of soils retentive of moisture, much better above than below. When so built, and near the mansion, they could be turned to many useful purposes, as respects keeping meat and vegetables, with more economy as to ice, than when the ice has to be brought in pails and barrow-loads to the house.

So much for the place: now for the filling. The chief thing is to get ice from good clear water, and pound it well outside, but chiefly inside, of the house. If the water is not clean the ice will be unfit for preserving many things where fine flavour is an extra consideration. Every space of air enclosed between pieces of ice will hasten the decay of the ice whenever these spaces can gain access to the air above them. When filling in frosty weather it is a good plan to use a little water for filling up the crevices, which soon freezes the whole into a compact mass. All ice with leaves and pieces of wood in it is to be rejected if better can be had, as they will make a sort of free space round themselves long before the summer is passed. In packing it is advisable to keep the centre the lowest, and the outsides the highest, so that the moisture contained may find its way to the centre and there be frozen, instead of passing through the ice at the outside and escaping. This same rule should also be attended to in taking the ice out of the ice-house. It is impossible to break the ice too fine—the more like sleet and snow the better, and the firmer packed the better. This is even more necessary when the house for keeping it is small.

As to keeping ice when obtained, the great object is to prevent it being surrounded with a moist stagnant atmosphere. A dry air, though warm, will exert much less influence in melting the ice than a damp air though cold. Two facts tended to alter my views on ice-keeping. First: So long as the ice was above the doorway, or even somewhat above the ground level, it kept very well indeed: because, I imagine, there was so much less moist air in the house, or air of any kind, and until it sunk somewhat lower it came less under the influence of the increasing heat of the summer acting on the ground surrounding the ice. The second fact was, that in opening such a house in summer, after the ice had sunk considerably, a stream of foggy air issued from the door like the vapour from a wash-house copper. I used to be anxious not to have the doors open a moment more than was necessary; but I found that the dry hot air of a summer's day melted the ice less than this moist air hanging about it. The dry warm air, however, did melt the ice when playing at once upon it. A dry non-conducting medium over the ice, was, therefore, seen to be important, and likewise some simple mode of getting rid of the moist air. Both can easily be managed in unison with increased usefulness from the ice-house; as, without such precautions, meat and vegetables, though placed there, will be kept there at the expense of flavour. These evils will be remedied by keeping the air over the ice dry and in movement. Have a hole in the door from 2 to 3 inches in diameter guarded with fine wire, and a plug to regulate the draught, and have another of a similar size in the roof, regulated in the same way, and then fog can hardly accumulate. Spread a clean cloth over the surface of the ice, split up the middle, so as to be moved easily to either side when you wish to place articles on the ice, and cover the cloth with 6 or 8 inches of clean straw, to be changed when it shows the least signs of mouldiness. The air thus admitted clears off the vapour, and does not act on the ice, owing to the straw on the surface—the only place where, as already remarked, I consider straw to be useful in a regular ice-house. In practice, I may here state, that I never satisfied myself that salt or salt water was beneficial for keeping ice in ice-houses or not. Sometimes I thought it did service, sometimes the reverse. The science of the matter is somewhat conflicting. Where very low temperatures are wanted, of course salt will be used with ice, and especially with snow, but in such cases it must be used with caution, or there may be too much freezing.

Houses for ice, however, whether below or above ground, and of whatever they may be built, are chiefly used for preserving various matters in them, and for such purposes should be near the mansion. When ice is merely wanted to be taken to the mansion it may be preserved in ice-heaps just as well as in an ice-house, and in some respects even better. The principles of action are the same, but the carry-

ing-out of these is a little different. Of two favourite positions for an ice-heap we should select, when we could get it, a level space some 24 feet or more in diameter, with a sloping bank above it on one side, and a slope or dell below it on the other. In such a place the ice could be brought to the top of the bank, broken there, and then sent down an inclined plane, in the shape of a trough, to where the centre of the heap should be. Suppose the heap were to be a cone some 16 feet in diameter, and to be raised 10 or 12 feet to a sharp point, then the base for 18 feet or so should be raised, and the ground slope from it on the bank side, as well as the other, and a little ditch be made there, so that no rains on the ground near it should reach the ice. A few pieces of wood, a layer of faggots, and then some litter or stubble, will make a comfortable bottom. This bottom not only secures dryness, but prevents the heat of the earth in summer greatly influencing the heap from below. Men must keep the heap in a proper form, drawing it in gradually from the base to the summit, and using a little water if the ice is too hard to build nicely. The next best position is an open space, with a natural hillock for its centre. Prepare the bottom in a similar way; but here there will be less danger of water. Carts may be emptied on either side, and the ice shovelled up and put in its place when broken. A cone of that size will require about thirty good loads of ice as taken from the water. The more compactly it is built the better it will stand. Though generally built in round heaps, yet an oblong parallelogram would answer equally well. The great thing is to have a sloping side to throw off the wet; and it is of little moment whether a person has one large heap or several smaller ones. When heaps are made oblong, something like a huge Potato-pit, of course the opening to take out ice will be made at one end, in a round one at one side. Much depends on keeping the opening exposed as short a time as possible.

However built the sides must not be too steep, or the coverings will not be easily kept on. When finished as firmly on the sides as possible, it is advisable to wait for a frosty night before covering it; and if that should not come a good shower will do it good, as it will make the outside a dense sheet of ice.

Snow rolled in heaps when well consolidated, and a little water used to enable the workmen to compress it, is little inferior to ice, either for ice-wells or ice-heaps. When a good fall takes place, and there is an open park to go to, it is easy to get a great quantity of it when fresh fallen, or when there is a slight thaw. When hardened, however, a little on the surface with frost or wet, it is vain to attempt to roll it into heaps.

The heap being made and finished, the next thing is to cover it up securely. A layer of 3 inches or so of clean wheat straw should be placed all over it. After that, when possible, the covering next the straw should be of an open nature, and the very outside rather of a close nature. Provided the outside air does not penetrate, the more air enclosed between the outside covering and the ice the better it will keep. Thus, after the straw, we have seen 9 inches of rough stubble put on, and the outside formed of 9 inches of tree leaves. Again, we have known small spruce or larch faggots used above the straw for a foot in depth, and then a thatching of straw from 9 to 12 inches thick, and both answered well. Where tree leaves can be easily obtained, I would prefer 3 or 4 inches of clean straw, and then 6 inches of leaves at first, increasing the amount gradually to 12 or 18 inches of leaves, according to the heat of the summer. When these are once settled it takes a very strong wind to dislodge them, and if the sides are moderately steep rain passes freely down the outside without penetrating to any extent. If the above amount of leaves were put on at once, they might be liable to heat. Vermin rather dislike burrowing in the tree leaves. Any other substance will do, provided the same conditions are observed.

One thing we must guard against, as a cause of failure. Some people, extra careful, put a rough frame over their ice, and the covering over it. I never saw one case in which such a mode answered well. When the ice sinks the frame does not sink with it, vacancies are formed between the ice and the coverings, these get filled with moist vapour and melt the ice, or sometimes holes are also formed in the covering, by which the warm air outside has free entrance

to the heap. By placing the covering at once on the ice, the covering sinks as the ice sinks, and no space is given for damp vapours, nor yet much chance for any openings being formed. At any rate, I have never seen these kindly-intentioned rough frames used but disappointment more or less was the result. It would be better to construct a wood house at once, and have an air-tube in the roof and doorway. In heaps nothing should come between the ice and the covering.

Several inquiries have been made as to whether an American or Cobbett's ice-house would not be preferable to houses or ice-stacks; and also requesting a short outline as to the mode of making them. First, then, as to making. Choose a suitable spot where you can describe a circle some 19 feet in diameter. In the centre fix a post 10 inches in diameter, and 15 feet above the ground level. Describe a circle 10 feet from the centre, and in this circle, at regular intervals all round, fix fifteen posts, 9 feet above the ground level, and about 6 inches in diameter. Connect these with a plate at top. In the outer circle of 19-feet you will want fifty-four posts, 5 feet high, and each some 5 inches in diameter. These also are to be connected with a wall plate. The centre pole will at its top form the apex of the building inside. Any carpenter will know how to put on the rafters, so that they may extend beyond the outer line of posts. These will be thatched with 4 feet thick of clean straw. The space between the outer and inner rows of posts is also to be filled with straw closely packed, and, of course, there will be a doorway, or rather two, with a space between, for admittance. The ice is kept in the ten-foot circle.

Now, we do not think there would be any economy in the use of such a house in many parts of this country—first, owing to the posts not being thickly enough placed to prevent our shorter straw from bulging; and chiefly because, independently of the yearly sinking of the straw, and the necessity of fresh packing, in most country parts it would be almost impossible to prevent such a building being burrowed in by vermin, and the holes would admit air to the ice. Our opinion is that a building of wood, brick, or stone, with double walls, would prove the most economical in a few years.

One word more. When ice has to be taken to the mansion for various purposes, the preserving of it as long as possible is a matter of some importance. Ice-tubs are, therefore, very useful for the superintendent of the kitchen or the cellar. They may be made of any size or shape. We have a very useful circular one near the cellar, 3 feet in diameter at bottom, outside measure, 30 inches in diameter at top, and 3 feet in height. The bottom is formed of wood some 4 inches thick, the sides of the same 3 inches thick, lined inside with cork 1 inch thick. It is supplied with two lids, one thick, and similarly lined, that fits into a groove, so as to be on a level with the circular outside; the other to go over that, and come down a couple of inches over the outside. It used, also, to be lined with woollen cloth, but that seemed to be of little consequence. It is painted outside of a whitish colour. There is a small iron vessel fixed inside that would hold somewhere about two gallons of water; and, there being a pipe from it communicating with a tap outside, there is always a ready command of iced water during the summer. Bottles of wine, &c., are merely placed among the ice. Though this tub stands in an airy place, the ice keeps a good while, if the lid is not often opened.

If some of our humbler friends desire a glass of cool water in summer, the simplest plan to obtain it is to fill a porous earthenware bottle and set it full in the sun, with a woollen cloth fastened round it, and that cloth kept wet. In such circumstances the hotter the sun the cooler will the water become. Though a glass of such water is considered a luxury in hot weather, we question much if the frequent use of it would be conducive to health.—R. F.

CHANGING OCCUPATIONS.

I HAVE been a reader of your Journal for one year and a half, and at present being almost unable to decide what to do, I write to you for advice.

Though I have taken your Journal for the time stated,

yet I am not a gardener, but a tailor in a country village in Yorkshire; and the reason why I ask for your advice, is because I have such bad health with my present trade, that I should like to become a gardener. If you could inform me how I am to succeed in getting a situation in the gardening line, you will greatly oblige—A YEAR AND HALF SUBSCRIBER.

[We would willingly aid any one who is in bad health. You do not say a word about your age, nor what you have been in the habit of doing beyond your trade, nor whether you have tried gardening much in practice and detail. For a man to change his occupation or trade is always a matter productive of very important consequences. The very best excuse for doing so would be want of health. Where the constitution is not materially injured, a change of occupation will often effect a great measure of benefit, especially where there is a natural bias or aptitude to the peculiar trade that is selected for adoption. We should not be surprised if gardening morning and evening would renovate your health, and thus enable you to follow your first calling. We have known village tailors become almost independent gentlemen in their circumstances; but it is rare, and the

instances are few and far between, in which working gardeners can do much more than merely make their way. Recollect all is not gold that glitters. The glittering gold that comes to the gardener, as well as much of his payment, will consist in the belonging to "such a pleasant and delightful occupation." Be certain that you can make a little reality out of the poetry and romance of the occupation before you give up making garments. To make sure of this matter, try and get as a labourer into a nursery or gentleman's garden for a month or so, and then you will be more fit to judge whether you had better change your occupation or not. You will have little chance of getting a situation for yourself worth holding, until you have been some time in practice. We have known several cases of hard-studying clergymen who suffered frightfully from that scourge, tic doloireux or neuralgia, and who obtained no relief until they became active gardeners, working hard every morning and evening amongst vegetables and flowers, and from the fresh air and fresh-turned earth getting fresh vigour into their physical system. Try this and a short time as a labourer before you decide.]

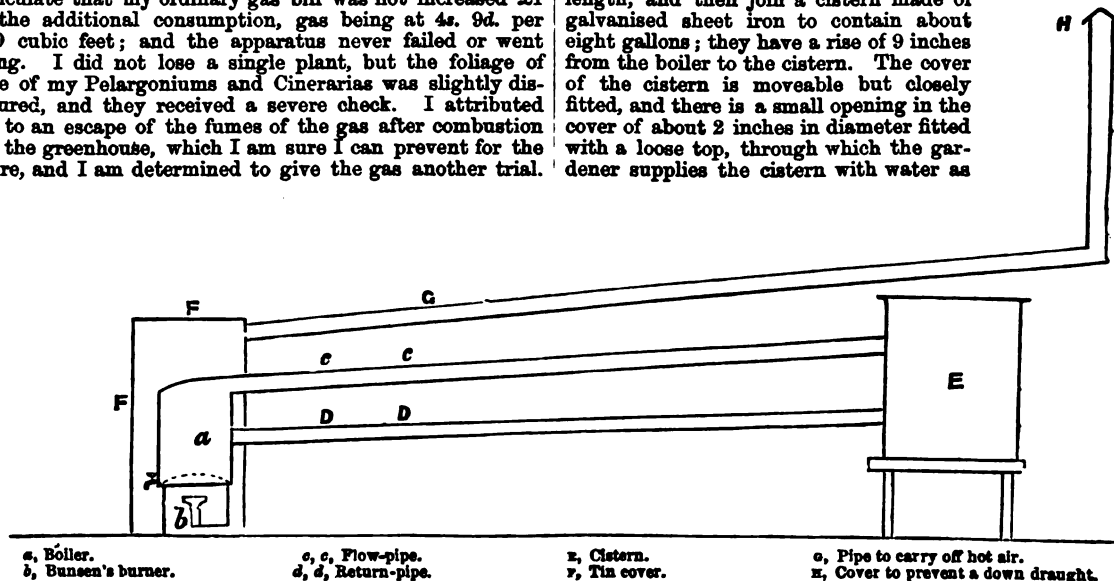
HEATING BY GAS.

AN article on this subject which appeared in your Number of the 7th of June induces me to send you my experience of heating a greenhouse by gas—with what success you can judge.

I found myself last season with a house extending over an area equal to 30 feet by 11 without any means of heating it. I was in favour of gas from its manifest advantages to an amateur; and in the face of much dissuasion I decided to set up a slightly formed circulating hot-water apparatus, heated by gas from a Bunsen's burner. I was able easily to keep the temperature in the house up to 40° or 45° in the most severe frost of last season. I had to light the burner about five minutes past four or five o'clock at night; and I calculate that my ordinary gas bill was not increased £1 by the additional consumption, gas being at 4s. 9d. per 1000 cubic feet; and the apparatus never failed or went wrong. I did not lose a single plant, but the foliage of some of my Pelargoniums and Cinerarias was slightly discoloured, and they received a severe check. I attributed this to an escape of the fumes of the gas after combustion into the greenhouse, which I am sure I can prevent for the future, and I am determined to give the gas another trial.

I will describe the whole apparatus, as I think it probable that some of your readers may, like me, be glad to avoid the trouble of attending to a fire in the middle of a winter night.

The boiler, made of copper, is cylindrical, set on end. The bottom is 9 inches in diameter, and is slightly concave to collect the heat, and the top convex to an equal degree. It is placed on a skeleton iron stand, which raises it about 9 inches above the floor of the house, leaving only sufficient room for the burner underneath. From the boiler are two pipes, one from the middle of the side, the other over it as high as it can be placed (in fact ordinary flow and return pipes), of two-inch gun-barrel tubing; they are 20 feet in length, and then join a cistern made of galvanised sheet iron to contain about eight gallons; they have a rise of 9 inches from the boiler to the cistern. The cover of the cistern is moveable but closely fitted, and there is a small opening in the cover of about 2 inches in diameter fitted with a loose top, through which the gardener supplies the cistern with water as



it is exhausted. This top is useful to allow of evaporation in case the air of the house becomes too dry. There is a stopcock at the bottom of the boiler to draw off the water if necessary. The top of the burner is about 3 inches under the bottom of the boiler, and in an hour and a half it will make the water nearly boiling hot. In fifteen minutes it will sensibly affect the temperature of the house.

Most skilful gas-fitters understand Bunsen's burners. They are constructed to burn atmospheric air and gas together, the result being a clear flame almost free from smoke, giving out great heat but only a little light. Such is the entire heating apparatus, which is certainly capable of keeping

frost out of an ordinary greenhouse. But an addition to it has yet to be described; for, judging that the fumes of the gas if allowed to escape through the house would be deleterious to the plants, I had the boiler and burner all enclosed by a tin case set against the wall, and plastered round where it joined the wall to keep it close. A door in it allowed of the gas being lighted, and I think the escape which damaged the plants was about this door. A two-inch tin tube the entire length of the house, and then passing out, served to carry off the fumes of the gas; and the hot air passing through it aided materially in warming the house. I intend this season to have the door in the tin

case soldered up, and one opened through the wall of the house instead (12 inches square will be ample), leaving no possible means for the gas to escape into the house. One great advantage of heating by gas is, that all the heat generated is available inside the house, none of it is lost. An apparatus such as I describe ought to be set up for about £6.

I found only one drawback in using this apparatus—viz., that a considerable quantity of water is precipitated by the combustion of the air by the Bunsen's burner (I would say as much as half a pint every night). This water flowed over the floor of the greenhouse, and kept it rather in a mess at that part of it, and I was informed by an eminent gas-engineer that this water was deleterious. It might have been the evaporation from it that injured the plants. However, as it will be precipitated altogether within the tin case, an arrangement can be easily made to make it flow off to the outside of the greenhouse by a small aperture left for the purpose.

I cannot agree with Mr. Wills that it will be better to apply the heat direct by a flue or pipe, at least when heating a conservatory. I think that the circulating hot water is necessary to fix and diffuse the heat through the house and give it out gradually. In the way that he uses it the earth lying on the pipe would produce the same effect as the hot water, but the apparatus must be made of light materials. A friend of mine lately set up one after seeing the result of mine. His gas-fitter would not have the light materials, but used the heaviest four-inch metal pipes; and when his apparatus was set to work, he found he could not get as much heat with thousands of feet of gas as I did with hundreds.—S. J. H.

PORTRAITS OF PLANTS, FLOWERS, AND FRUITS.

MACLEANIA SPECIOSISSIMA (Splendid Macleania).—*Nat. ord.*, Vasciniaceae. *Linn.* Decandria Monogynia. Native of Columbia. A lovely flowering shrub, flowers scarlet tipped with yellow. Requires to be placed on a bracket, in a warm greenhouse, that its branches may hang down.—(*Bot. Mag.*, t. 5453.)

DENDROBIUM MARGINATUM (White-edged Dendrobium).—*Nat. ord.*, Orchidaceae. *Linn.* Gynandria Monandria. Introduced from Moulmein by Messrs. Hugh Low & Co. Flowers white, lip spotted with orange; lower lobe orange, but white edged.—(*Ibid.*, t. 5454.)

MICRANTHELLA CANDOLLEI (De Candolle's Micranthella).—*Nat. ord.*, Melastomaceae. *Linn.* Decandria Monogynia. Native of the Andes at an elevation of from 9000 to 10,000 feet. Flowers purple, with very prominent yellow anthers. "Well suited for greenhouse cultivation."—(*Ibid.*, t. 5455.)

MECONOPSIS ACULEATA (Prickly Meconopsis).—*Nat. ord.*, Papaveraceae. *Linn.* Polyandria Monogynia. "We had the good fortune to have this rare and charming plant flowering in the open border in the June of the present year." Native of the Kumaon and other South Indian mountains at elevations of from 10,000 to 14,000 feet. Flowers large, purplish blue.—(*Ibid.*, t. 5456.)

CYMBIDIUM TIGRINUM (Spotted-lipped Cymbidium).—*Nat. ord.*, Orchidaceae. *Linn.* Gynandria Monogynia. Native of Tenasserim Mountains at an elevation of 6000 feet. Introduced by Messrs. Low & Co., Clapton Nursery. Flowers cream coloured; lip with short crimson stripes.—(*Ibid.*, t. 5457.)

AZALEA—*Souvenir de Prince Albert*. White, with centre of each petal blotched with deep pink.—(*Floral Mag.*, pl. 201.)

AURICULA—*Lord Clyde*. Raised by Mr. Lightbody. Dark maroon, paste rather too angular, but solid.—(*Ibid.*, pl. 202.)

ONITHOLOGALUM THYSOIDES.—Introduced by Messrs. Carter from Natal.—(*Ibid.*, pl. 203.)

FUCHSIA—*Cloth of Gold*. Raised by Mr. Stafford, of Hyde, near Manchester, "a golden variegated-leaved sport of *Souvenir de Chiswick*."—(*Ibid.*, pl. 204.)

WALLFLOWER—*Graham's Yellow Perfection*. Raised by F. J. Graham, Esq., of Cranford. "Pure yellow, large size, good form; received a commendation at South Kensington as a beautiful, bright-coloured, hardy spring flower, remarkably sweet-scented."—(*Florist and Pomologist*, iii. 145.)

CHICKENS VERSUS GREEN FLY.

THE subjects of which the two parts of this Journal treat—gardening and poultry-keeping—are usually supposed to be antagonistic. Poultry are gardeners' detestation, for they believe that their trim gardens are sure to be spoiled by them. Build up the wall of separation high; let not the fowls, the awful fowls, into the sacred garden; they peck, they scratch—in short, "My good sir," exclaims the gardener, "don't, please, even name the horrors to me; I shall dream about them, and wake in a fright."

Now, for some years I have held, up to a certain point, an opposite theory, and carried it out in practice by keeping a few bantams, which have access to every part of my garden, being quite sure that they do more good than harm. As a case in proof: the other day I was walking among my last year's budded Roses, brushing off the green flies with a painter's brush (the best and most efficacious thing I know; indeed, I usually carry a short one in my pocket for the purpose), when some-six-weeks-old chickens happened to be near, and first one and then another tried a green fly or two, and they settled that they were very good eating. I encouraged the chickens to follow me; so I went from Rose to Rose, brushing the tender shoots and buds, and finally, before leaving each tree, giving a shake of the stem, when down rolled the already-disturbed troublemakers from the leaves, to which in their perplexity and distress they were clinging; once on the ground they were eagerly eaten by the chickens. Pleased with my success, I then went to another part of my garden, to my old standards, calling to me another brood of chickens of a similar age. The same scene was again enacted, and in addition I threw every grub I found, green, or white, or brown, to the old hen, which accepted my offerings with manifest delight. Thus I managed to dislodge and put beyond all power of re-appearance some thousands of green flies, at the same time giving a treat to my chickens.

I see that suggestions are sometimes made that poultry-lovers should communicate their experiences, so I send one of mine.—WILTSHIRE RECTOR.

GARDENERS BENEFITED BY TRAVELLING.

THERE is a good old rule in Germany which has not yet become quite obsolete, that every apprentice should be obliged to travel for three years before he is permitted to open business on his own account. I have the honour of belonging to a little scientific society in London, formed of members anxious to study the great natural laws which have brought about the changes in our globe, and which are combined into one universal science—Geology. The President of that society is one of the greatest scientific men of the day, and, at the same time, he is almost entirely self-educated. I attend the meetings of that society whenever opportunity permits; and one of the points which are most frequently brought to our notice is the desirability of visiting different parts of our own land for the purpose of personally observing the effects of these phenomena, and the President is fond of showing us how easily this may be accomplished. Thus the subject has been repeatedly brought before me, and I believe that it applies with greater force to gardeners than it does to the members of any other profession.

The gardener who has learned and practised horticulture in his native country only has done but very little towards making himself proficient. He should travel as far and as widely as he can, in order to study the different effects of soil and climate, the various artifices which each renders necessary. The system of gardening carried on in a sandy arid country is altogether different from that which must be practised on a tenacious clay. While in one place he visits he will find it necessary to take advantage of every scrap of sunshine with which the spot is favoured, he will find in another that the sunshine is more injurious, and has more carefully to be guarded against than the severest frosts experienced in another place. With regard to cold, again, he will find in one place that a tiffany house will protect, during the winter, plants which require double sashes, straw mats, and all the appliances which can be invented at a place not much more than five hundred miles away. Then

again, a gardener can seldom visit a garden at a little distance from his own without seeing something worthy of note. Every horticultural establishment managed by a thinking man (no matter how small it may be), is sure to present to the notice of the visitor some feature which is worth being remembered—something to think upon and carry into practice whenever the chance comes. The further he travels from his own locality the more numerous these examples will become. Travelling, combined with a certain amount of observation, which is easily attained, will enable a gardener in a very few years to obtain an immense supply of the raw material, which, being properly worked-up, will place him in the front rank as a practical gardener. Our young men, generally speaking, are in too great a hurry to get into good places. They would get far better situations, and be very much better fitted to fill them, if they would only quietly work on for a few years longer, working as assistants, and travelling as far from home as they can manage.

But it may be said that this is all quite visionary. I may be, and often have been asked, "How is a young gardener, earning only some 10s. or 12s. per week, to afford to visit the distant parts of his own country, much less foreign lands?" My answer is that "where there's a will there's a way." I could bring forward more than one example to prove this. I know one young gardener who, having finished his apprenticeship, worked in several gardens at 12s. per week, sometimes with, sometimes without the advantage of a botchy. I knew him more than once give up 15s., to which his pay had been raised, and go to work at another place, where he could learn more, at the old wage of 12s. Once, for a short time, he got as far as 18s., but this he gave up for a situation at a considerable distance, where he only earned the old pay. While working in these places he saved enough money to carry him across to the continent. He got a situation and worked there for some time. He visited Holstein, Hamburg, Prussia, Austria, Saxony, Hanover, and Belgium, as well as a number of the smaller States. He learned the language sufficiently to be able to converse in it with considerable fluency. He did not travel through these countries as one does who runs over to the continent for a month's holiday, but did much of it on foot, visiting the gardens most worthy of note; or, when the railway was resorted to, the journey was done in short stages. All this cost, in excess of what little he earned there, not a shilling more than £9. He has ever since declared that it was money well expended. He did not extend his travels so far as he intended, some domestic circumstance bringing him back to this country just at the time when he had got another situation at Frankfort-on-the-Maine, intending to make that the centre of a more southern series of journeyings, and hoping to visit Italy, and return by way of Switzerland and France. I take this simply as an instance of what may be done upon very small means. I know that the person spoken of had not a penny more than he had saved while working upon the rates of wages mentioned above. He did not get help from home, as many young gardeners do, to their great injury, nor did he while saving that sum deny himself any of the necessities, and some few of the luxuries of life.

The money expended upon travelling is like a sum placed at your bankers, and bringing in a good rate of interest all through life. You can always discover whether or not a man has seen much of the world, even if you only have ten minutes conversation with him upon any subject, no matter what. You find that he is not so full of prejudices; he gives credit where credit is due; he does not think his own country is the best spot upon the face of the earth in all respects; he is willing to believe that other systems of gardening are as good or better than that he practises, and he is ready to adopt and incorporate with his own every good and practical idea. Let me illustrate what I have advanced by one or two practical instances. Kitchen gardening may be very well carried out in many private gardens in our country; but very few of them would bear being measured by a debtor and creditor account if the matter of rent were also taken into account. Will the value of the vegetables and fruit produced balance the expenditure in labour, manure, &c.? It is not, perhaps, expected that it should do so. So much the better for the gardener.

There is not a young gardener in the country who would not be the better for a twelvemonth spent in a market garden near London. High rent and heavy rates have to be paid there, and yet market gardening is far from being a profitless business. He would there learn how to economise to the utmost; how to insure the greatest possible supply from the smallest space; how to get three or four crops a-year from the same ground; and the way in which not even a rod of ground is allowed to be idle for more than a day. The young gardener, in order to see how this was managed, would have to work very hard upon very small pay; but he would in that year learn what would be invaluable to him through life. He might, perhaps, attain the same end by getting a situation in the neighbourhood, and carefully watching the proceedings at some market garden near him; but this, of course, would not be equal to working upon the spot. Then, again, to take another and widely-different instance, we may say that if half the precautions taken in Germany to secure plants, which we consider hardy, from the effects of frost were practised in this country, our gardens would present a much more interesting appearance. What would a British gardener think of a *Deodar* with all its branches carefully packed together, and then thatched over with reeds or straws for four months in the year? And yet that and many other expedients are there regularly carried into practice. If the same trouble were taken with plants which are half-hardy here, how many more species might we not cultivate? All the beautiful South Australian plants, those of Chili, Japan, California, and many other parts, might then be freely introduced, and would have a glorious effect. I am trying this now with a *Dasylium*, a species of *Eucalyptus*, and some others. Two winters have been safely got through. Then, again, a season would not be lost in watching the care taken in the growth of bulbs in Holland and Germany. But I might go on multiplying instances of the things worthy of observation to an almost unlimited extent. Forcing as practised in various parts, the different modes of ventilating houses, the management of timber on forest lands, and a score of examples might be quoted.

The means for getting about from place to place are now very much greater than at any former time; cheap excursion trains are plentiful, and steamboats will, for a few shillings, take one a long distance. Indeed, if one only has the wish, he can now readily travel very cheaply from one end of the country to the other. No young gardener who seriously intends to educate and fit himself for taking a high stand in his profession should neglect the opportunities with which these furnish him. He should take advantage of them to visit and observe as much as he possibly can, and in so doing he will surely find his reward. Travelling is one of the luxuries which were formerly confined to the rich, but it is now within the means of everybody; it is no longer a means of education which the wealthy alone enjoy.

To prove that I practise what I preach, I may mention that this paper was commenced at a spot six hundred and fifty miles away from that where it is now completed, and it has to be sent three hundred miles by post to the place where it will be printed—glorious Auld Reekie.—(*Scottish Gardener.*)

WORK FOR THE WEEK.

KITCHEN GARDEN.

PLY the fork incessantly amongst the growing crops of Cauliflower, Broccoli, and Winter Greens, and continue to manure and trench up every piece of ground as it becomes vacant, and plant it with such as the above for late crops. *Celery*, prepare trenches for the late crop, water the growing crops of the same, and stir the soil about them. *Cabbages*, reserve and get ready a patch of ground for the sowings of Cabbages to stand the winter. The soil should be of a light, sandy nature, and not too rich, as such encourages a luxuriant growth, which is apt to make them tender. *Endive*, plant out the strongest from the early sowings, and sow also more for late crops, the Small Green-cured is the best. *Garlic* and *Shallots* to be taken up and dried for storing. *Onions*, pull up the crops of winter Onions, lay them in rows with the roots turned to the sun, and frequently turn them until the

stalks are withered, when they will be fit for storing. As they are liable to decay if bruised, they should be carefully handled, and not thrown about like so many stones. Let them be very dry when stored, and spread out thin, not laid in heaps. *Lettuce*, sow also more, and keep a good succession of Radishes and Salads. *Peas*, the late-sown should have attention paid to watering and staking. *Potatoes*, the lifting must be prosecuted as fast as they become ripe. *Spinach*, a good breadth sown now in rich soil will afford many successive pickings in the autumn, and will tend materially to save the winter beds from being picked before they become strong.

FRUIT GARDEN.

Espalier Apples and Pears to have the leaders tied in, the superabundant shoots spurred, and the fruit well thinned. Attend, also, to choice Apples and Pears planted in the open quarters, but not trained; remove superfluous shoots, and try the effect of tying downwards the points of some of the strongest shoots. It has been practised with very good effect on trees inclined to grow too luxuriantly. Attend to the stopping and nailing of wall fruit trees in general, and prosecute the thinning of Grapes on the open walls. Remove all runners from Strawberries not required for making new plantations. Fruit trees generally may now be budded.

FLOWER GARDEN.

Dahlias that have attained a good size to have their side shoots properly thinned out, leaving three or four of the strongest and best-set shoots. Examine the fastenings carefully; if they have got too tight and are cutting the stem remove them, and retie them, allowing plenty of room to admit of the stem increasing in size. See that the pots on the top of the stakes are gone over every morning, and all the earwigs that are found destroyed. These insects, in common with others, are very numerous this season. We find that a little soot sprinkled on the plant when wet with dew is an excellent preventive to their ravages; as long as that remains they will not touch the foliage. Cover the blooms of Carnations and Picotees as they expand, placing cardboard collars beneath them. Layering may be commenced, beginning with the grass or shoots which are most forward. As the Pink pipings root, prick them out in good soil. Trimming, staking, and pegging-down must be well followed up at this period, where neatness and order are essential. See that sufficiently strong stakes are applied to plants with heavy foliage and gross habits, such as Dahlias, Hollyhocks, Larkspurs, Phloxes, and tall-growing Asters. Keep Roses as much as possible free from insects, and if time can be spared, dead blossoms should be removed. Budding may be proceeded with. Proceed with the propagation of favourite sorts which it may be desirable to increase, either by budding or cuttings. It is generally preferred to have the Hybrid Perpetuals, Teas, Chinas, and Bourbons, on their own roots, and firm short-jointed shoots of these root very freely at this season. To insure success they should be afforded a slight bottom heat, be carefully shaded, and not kept too warm until they emit roots. They will, however, root under a hand-glass on a shady border. Remove suckers from worked plants. Cut back the shoots of the autumn-flowering varieties to the most promising eye as soon as all the flowers are expanded and begun to fade.

GREENHOUSE AND CONSERVATORY.

This is generally a critical month with the greenhouse plants out of doors. The fervid heat is sometimes so great as to produce the tropical winter of vegetation, when the parching heat of the sun acts upon, and produces in some degree a dormancy in the system of plants; at other times when occasional showers fall, and we see the surface of the soil in the pots moist, we are satisfied until the drooping or withering foliage upbraids us for our neglect, and often, particularly with Heaths, New Holland, and other such plants, it is noticed when too late to save them. The ill effects may be avoided by plunging the pots in coal ashes, and syringing the plants overhead of an evening, and examining them when doubtful on the subject, by gently turning one or two out of their pots to see the state of the ball, as it requires some experience to distinguish whether a plant wants water or not from the ring produced by rapping your knuckles against the side of the pot. The

conservatory will now be gay with Balsams, Globe Amaryllids, Fuchsias, Pelargoniums, Cockscrocks, Thunbergias, Japan Lilies of sorts, and the rafters and trellises with creepers arranged in festoons, or in any other manner most suitable to give a pleasing effect to the whole. The Camellias out of doors to be surfaced with fresh soil if they require it. The thinning of fruits and flowers is an operation that we generally perform with great reluctance; nevertheless, it is one of the most useful to produce fine fruit and flowers, and a regular annual succession of them: therefore, we would advise that the buds of the early-flowering Camellias should be gradually thinned, leaving ultimately only as many of the most healthy and prominent buds as the condition of the plant would bear without fear of injury to its strength and productiveness the following season. Cinerarias, whether seedlings or suckers to have regular attention, and those intended for autumn work to be potted forward without delay. The Chrysanthemums that had been planted out in May, and repeatedly stopped as recommended during the summer, will now be bushy plants. The last stopping may be given towards the end of the month to such as are intended for early blooming. The stopping of the others to produce a succession may be continued to the middle of August.

STOVE.

Encourage the onward progress of the young stock for winter blooming. Maintain a moist and comparatively high temperature. Orchids must be carefully shaded during sunny days, but when the weather is at all cloudy allow them as much light as they will bear without injury. Keep the foliage clear of insects and dust, by frequent syringings or spongings as may be necessary.

W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

BESIDES taking up Potatoes and pricking out winter stuff, the chief work has been surface-hoeing among growing crops, alike to kill miniature weeds and keep moisture in the ground, and mulching with short grass and litter the sides of rows of Peas in full bearing and coming into bloom. We have been able to give but very little water, and even our sewage-tank has been emptied three times during the week. In such parching weather Cauliflowers can scarcely produce large heads unless they be liberally watered or freely mulched. For the latter purpose, nothing of a literary matter comes amiss, and as soon as the crop is taken it is dug down and thus helps the next one. Thinned out Cucumbers, which still continue to do well. Planted out some of the smaller Tomato plants against a wall, and turned out larger plants from large pots, the plants showing plenty of fruit, against the back wall of an earth pit, where they will receive pretty well as good help as if they were trained against a wall. These will ripen plenty of fruit before the cold weather comes. We have grown them plentifully against a wooden fence, and even on the open ground full in the sun; but in the latter case it was late before the fruit ripened, and very often it had to be gathered when merely changing colour, and to be put into a warm place to colour. In the latter circumstances, connoisseurs have informed us that the flavour of the sauce was inferior. To get the fruit ripe early the seed should be sown in March, and the plants grown on under glass until the end of May, and then be turned out. To grow them late and where green fruit are a consideration, it is best to sow about the middle or end of April, and plant out in the beginning of June, before the plants receive a check. In managing them afterwards the chief points are—to stop the shoots a joint or two above the clusters of fruit as they show, and to remove all the foliage, or at least the larger leaves, that would at all shade the fruit. When grown in soil at all rich there is sure to be a superabundance of luxuriant foliage. This might be remedied by growing in poorer exhausted soil, but then the fruit will not be fine to look at nor yet so juicy. All things considered, we prefer rich firm soil, such as may be obtained by a couple of spadefuls of rotten manure to a plant, and then regular stopping and disleafing. Each leaf-stalk has generally from five to seven and more segments, and when such a stalk is not removed, from three to five of

these next the point are frequently taken off. This prevents the plants having a naked appearance. The stems are so juicy, however, that the plants will generally stand a good amount of disleafing. This is almost the only thinning that Tomatoes have, except when it is desirable to have a few very early fine fruit. In this case the above disleafing will have to be attended to, and all fruit on the plant, except the three or four first-formed clusters, should be cut off as they appear. When grown on the open ground they should be stopped and trained very much the same as Cucumbers are done. It is rather surprising that the fruit has been little used by us in the green state, or as a component part of salads, though largely used in this way by our cousins in America.

We are very anxious to defer planting out the *Winter Greens*, that have previously been pricked out, until the ground has been moistened, as, where other crops have been removed, the ground is excessively dry, and we can more easily keep the plants slowly growing where they are, in temporary beds, than supply them with water after planting. The planting has, therefore, been chiefly confined to turning out smaller plants by means of the dibber. In doing this we followed the good old custom of first watering the seed-bed before pulling up the plants, and then placing each handful of plants in a thin paint, made of water, soil, and rotten dung. By this means each plant, before being turned out, was well charged with moisture—a matter of importance when turned out into dry ground, and where all the watering that could be given was only a little drop close to the roots, extending little farther than the dibber hole.

If we recollect aright, we said something about planting by the dibber some weeks ago. We recur to it now because we have never seen a man, who had not been previously instructed, use the dibber without a great waste of labour power. Only the other day we counted the strokes made by an uninitiated person in satisfactorily fixing a Savoy plant, and found that the strokes for each plant averaged from five to ten; and then we could be quite sure that five out of the ten were hung—that is, all the potting had failed to fix the earth firmly about the roots, the chief thing to be attended to in dibber-planting.

We shall never forget how Mr. Joseph Knight, the predecessor of Mr. Veitch at the Exotic Nursery, Chelsea, taught some clever fellows how to make a pointed flower-stick, ranging from less up to more than half an inch in diameter, by two strokes of the knife. The first stroke in a sloping direction took away half the diameter of the stick at its base, the other stroke took away more than the half of what was left, and there was the stick pointed at once. Previously the sticks were receiving numerous strokes and whittlings. Just so with dibbling. So far as small things are concerned, two strokes are quite sufficient. For larger things in the open ground, three strokes may be necessary. First, There is the perpendicular stroke into the ground, to make the hole for the plant. Then, whilst the roots of the plant are suspended in this hole, there is stroke second, the dibber entering the ground two or more inches from the first hole, in a slanting diagonal manner, the point passing beyond the roots of the plant; and then a drawing quickly of the head of the dibber towards the stem of the plant leaves the roots and the buried part of the stem pretty well as firm as if they had been placed in the vice of a blacksmith. This is all that is necessary for planting. On removing the dibber, however, the hole left might admit too much air, and thus dry the roots of the plant. To prevent this the point of the dibber is drawn through the ground towards the planter over the mouth of the second hole, which just fills it sufficiently. Every pattering stroke beyond these three is just labour lost—a matter of no great consequence when only some half a dozen plants are to be put in, but a matter of some moment when the plants are numbered by hundreds or thousands. Besides, where many strokes are employed, the second diagonal planting stroke is apt to be given imperfectly. We recently noticed a row or two of young Cauliflower plants, that though refreshed with water once or twice, looked woe-begone whenever the sun rested on them. On inspection we found that the roots of almost every plant were hung when planted—that is, the earth was not firmed about the roots. Though numbers of pattering strokes had been given by the dibber, the second stroke we have alluded to had not been given,

and the slightest touch moved the plants out of the ground. Wheeled lots of fine, large, bolted Lettuces to the rubbish-heap, whence they might go to pigs to nibble. Without plenty of water it is next to impossible to keep them long in open positions. We were thankful we had lots on the north side of banks and walls, and beneath the shade of trees, where they needed but little water. Sowed Dickson's Favourite and Sangster's No. 1, early Pea; succession of Turnips, Radishes, Spinach, &c., and a bed of Kidney Beans, where they can be protected late in autumn.

FRUIT GARDEN.

Proceeded with laying runners of *British Queen Strawberries* in small pots, to be afterwards moved and potted. Would have done it sooner, but even now find we cannot place the pots down without injuring the fine fruits, and the watering of the little pots will also be apt to injure them. Most likely will cut off a number of runners and prick them out in rich soil 4 inches apart, and then lift in balls and pot for forcing. Keens' and Black Prince previously layered will soon be fit for being transferred to their fruiting-pots. These runners, just showing roots, will establish themselves quickly in beds if shaded from bright sun and sprinkled with water two or three times a-day.

This dry weather has brought on us whole clouds of birds. Nets they seem to laugh at. We have a small border planted with dwarf standard Cherries loaded beautifully, and the undergrowth *British Queen Strawberry* equally fine, and to save them we put a frame of posts to support the nets, and double-netted the whole; but as we went past yesterday morning five huge blackbirds were enjoying themselves, and singing out their notes of defiance. They one and all, with the impetus of a combined movement, broke through the net and escaped. The other day we stood at a short distance unseen, whilst a thrush went round and round the net trying to get his head in between the net and the ground, as, if they manage the head and shoulders, they will wriggle in the afterparts of their body. We had no gun with us, and if we had it would have been too bad to punish such patient determination. Lots of blackbirds and numbers of smaller birds escape by the same means, and when once they have found out this way of getting successfully in and out there is nothing that will stop them except killing them. A net is no safeguard unless put on securely. The very sight of it tempts them into the forbidden enclosure. We hope that plenty of rain ere long will furnish them with other moist food. We have been obliged to gather Raspberries just as they ripen to prevent the birds getting all, for as soon as the fruit was coloured they were sure to be at it; and so hard up are they for moist food, that the ground in some places is strewn with strings of Currants almost green, which they had pulled off to get one or two ripe berries.

Has any one ventured to decide how far there is a consciousness of doing right among the feathered tribe? What a contrast between the shrieking out "Murder! Murder!" cry of the blackbird, when he is thieving your fruit, and you approach him, and the graceful confidence with which the wagtail trips over the lawn, almost to your very foot, in pursuit of an insect; or the quiet deliberative hop from spray to spray of the white-breasted wall bird, in an orchard-house, looking so much at home in searching for insects as if he would like to be caressed, contrasted with a thrush, which, being disturbed at a Cherry tree, rushes to the end of the house, and stuns its faculties against the glass, which, if not strong, it also breaks. Why the seeming trust in the one case, and the terror in the other, but from some rather clear ideas of right and wrong?

If every tree and bush round a garden are to be sacred game preserves, the time is fast coming that, if we wish outdoor fruit, the fruit garden must be enclosed and covered all over with fine wire netting. Our old friend the robin, which we should be sorry to touch, is one of the most acute at getting under a net. None, however fine, will keep him out, unless it is fixed into, instead of on, the ground. Wherever he can pass his head between the net and the ground, he will get in and out his stumpy body.

The weather being so hot, we have just spattered a little whitened water on the orchard-house with a syringe. A very little dulls the force of the sun's rays. The first shower will take it off, and it is not likely we shall have much dull weather before we have rain, as, in dull weather, and in

moderate sunshine, the more light we have we like it the better—in fact, even now, the precaution taken has more reference to our water supply than to the force of the sun. We noticed a little spider coming on in two or three places in the orchard-house, and immediately we daubed all the open spaces on the back wall with flowers of sulphur, made into a paint with water and soft soap, so as to cause it to stick. We then shut up about three o'clock, and well syringed the trees. In three days we collected a handful of the worst leaves, about twenty; and though there were abundant traces of where the insects had been, we only detected one alive, and that sickly. The power of the sulphur is already going off, and so we will add a little more. The sulphuring should, indeed, have taken place before a trace of spider appeared. We have far more faith in preventives than in cures. Watered well the borders for trees on the back wall, and placed on the surface of the pots bearing heavy crops as much superphosphate as we could take up with the thumb and two fingers, and after watering we covered the surface with half an inch of rough riddled mushroom dung, to lessen the evaporation of moisture from the soil. The pots are also plunged for three-quarters of their depth, and that helps to keep the roots cool.

Gave a good watering to Figs; damped the floors of vineries where the fruit was late. Stopped and set Melons, and frequently turned large fruit ripening, as when they lie long in one position on a flat slate, &c., a mark is apt to be produced, and the rind will be apt to crack there. We have not yet uncovered our Vine-borders wholly, but we wish the sun had played on them for the last few days. Figs when fresh watered want more air, as otherwise they are apt to crack at the sides before being thoroughly ripened-up to the point.

A correspondent asks the best way for sending fully-ripened Figs to a distance. Will some friend tell us? For ourselves, we consider that a Fig just fit to be eaten—that is, like a globule of honey, will not bear to be carried farther than from the tree to the dining-room. When they must be packed they must be gathered before they are nearly so ripe as this, and though, of course, eatable after a long journey, they give no better idea of the lusciousness of a Fig gathered when fully ripe, than Peas conveyed to Covent Garden in sacks give an idea of nice young Peas gathered just before they are shelled and cooked.

Peaches in Peach-house have ripened faster than we wanted them, and we picked them frequently before they were quite dead ripe, as they keep better off than on the tree, and journey better in consequence. When fully ripe before being gathered and kept only for a short time, they become mealy and lose their rich juiciness. A good deal of tact is required to gather Peaches. The experienced man knows if they are ripe enough by putting his hand near them, hardly if at all touching them, as a touch is so apt to leave a bluish. A gardener who could scarcely be driven from his equanimity, did for once passionately jump out of it when a person who knew no better went along fingering every ripening Peach within his reach. This was even worse than a great gardener in a fit of absence of mind, going along admiring a house of Cucumbers suspended from a trellis, and picking off each bloom from the point of each Cucumber as he went along. "What are you at?" at last burst from the enthusiastic cultivator, who (as he told the tale), was so astonished that he could not speak.

ORNAMENTAL DEPARTMENT.

We intended to have had a gossip about the potting and general management of stove and greenhouse plants, but we would partly repeat the excellent timely directions of our friend Mr. Keane. The dry weather has rather browned our lawn in places. Mowing as generally practised was out of the question. Knifeing it so as to cut plantain and daisies was more in demand. The mowing machine even was little used, as it would have dipped rather deep, even when held with a light hand. In some cases the scythe was used lightly, and a good sweeping and rolling given. Of watering we need say nothing, for we have confined that almost to Calceolarias, and gave them only a little to keep them right. Most of the smaller things, as Verbenas and Calceolarias, have been slightly dressed with riddled old mushroom-dung. We could not give them more than half an inch, but we should have given them more if we had it.

Most of the Calceolarias were so treated a month ago, as the ground was quite hot enough for them. We are now giving the dressing partially to Scarlet Geraniums, as the ground is now hot enough to cause them to bloom freely. We would thus dress all our beds now if we had the material, as it saves much trouble in watering, and by keeping the roots near the surface encourages flowering.—R. F.

COVENT GARDEN MARKET.—JULY 16.

The market continues to be well supplied, and the demand is brisk. Pines, Grapes, Peaches, and Nectarines are sufficient for all requirements. Of Apples some good fruit of early kinds may now be had; and of Peas some excellent Jargonelles have come in from the continent. Strawberries are now falling off; the supply principally consists of Elton, with a few British Queens from late places. Of Asparagus, which is generally over by this time, some remarkably good samples are still to be had. Kidney Beans are beginning to come in in quantity, and bring 7s. per half sieve.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples..... $\frac{1}{2}$ sieve	1	6	to	0	Mulberries quart	0	0	to	0
Apricots.....doz.	1	0	3	0	Nectarines.....doz.	8	0	15	0
Cherries.....lb.	1	0	2	0	Oranges.....100	0	10	16	0
Currants, Red..... $\frac{1}{2}$ sieve	2	0	4	0	Peaches.....doz.	12	0	30	0
Black.....do.	4	0	5	0	Pears (kitchen).....bush.	0	0	0	0
Figs.....doz.	4	0	8	0	dessert.....doz.	2	0	3	0
Filberts & Nuts 100 lbs.	0	0	0	0	Pine Apples.....lb.	4	0	8	0
Gooseberries..... $\frac{1}{2}$ sieve	2	0	4	0	Plums..... $\frac{1}{2}$ sieve	0	0	0	0
Grapes, Hamburgs lb.	4	0	8	0	Quinces.....do.	0	0	0	0
Muscats.....doz.	6	0	12	0	Raspberries.....lb.	0	4	0	8
Lemons.....100	4	0	10	0	Strawberries.....punn.	0	6	1	6
Melons.....each	2	6	5	0	Walnuts.....bush.	14	0	30	0

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes.....each	0	4	to	0	Leeks.....bunch	0	4	to	0
Asparagus.....bundle	3	0	6	0	Lettuce.....score	0	9	1	3
Beans Broad.....½ sieve	1	6	0	0	Mushrooms.....pottle	1	0	2	0
Kidney.....qtn.	0	6	1	0	Must. & Cress.....punnet	0	2	0	4
Beet, Red.....doz.	1	0	3	0	Onions.....bunch	0	4	0	6
Broccoli.....bundle	0	0	0	0	pickling.....quart	0	6	0	8
Brussels Sprouts ½ sieve	0	0	0	0	Parsley.....½ sieve	1	0	1	6
Cabbage.....doz.	0	9	1	6	Parsnips.....doz.	0	9	1	6
Capitums.....100	0	0	0	0	Peas.....quart	0	6	1	0
Carrots.....bunch	0	5	0	8	Peas.....bushel	2	0	5	0
Cauliflower.....doz.	2	0	4	0	Potatoes.....sack	8	0	12	0
Celery.....bundle	1	0	2	0	New.....bushel	5	0	0	0
Cucumbers.....each	0	6	1	0	Radishes doz. bunches	0	6	0	9
pickling.....doz.	0	0	0	0	Rhubarb.....bundle	0	0	0	0
Endive.....score	1	3	2	6	Savoy.....doz.	0	0	0	0
Fennel.....bunch	0	3	0	0	Sea-kale.....basket	0	0	0	0
Garlic and Shallots, lb.	0	8	0	0	Spinach.....sieve	1	0	2	0
Gourds & Pumpkins, each	0	0	0	0	Tomatoes.....doz.	1	0	3	0
Herbs.....bunch	0	3	0	0	Turnips.....bunch	0	4	0	6
Horseradish.....bundle	1	6	4	0	Vegetable Marrows doz.	1	0	2	0

TO CORRESPONDENTS.

* * We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

BEVERLY BOSC PEAR LEAVES (*E. B.*).—They are attacked by a parasitic fungus. We know of no remedy.

SEEDS FROM THE ROYAL HORTICULTURAL SOCIETY (*S. E. H.*).—The specimen you enclosed is *Erysimum Peroffskianum*. We are surprised by your complaint of the seeds sent out by the Society, because we never heard before of their being unsatisfactory.

MINIULUS FLOWER (*Mauchline*).—It did not reach our office until the 11th, and was totally dried up.

GAS BURNERS IN GREENHOUSE (*M. C. Lymington*).—They will be very injurious to the plants, unless within a stove or a glass globe, with a tube rising from it and passing into the outer air. We mention a glass globe because you may wish the gas to light the greenhouse.

STRAWBERRIES ON CHALKY SOIL (*Provincial*).—We have grown Strawberries on a Hampshire chalky soil; but we had to make the soil 18 inches deep of good loam. If you do this, and have the bed covered in the spring an inch deep with cocoa-nut fibre refuse, you will be able to obtain crops of Strawberries. We found Keens' Seedling, Comte de Paris, and Hooper's Seedling succeed well.

MUSHROOM-BRDS MAKING (W. W.).—We will be glad to give particulars when we have information as to circumstances and materials at hand. In the meantime see an article on the subject at page 447 in our Number for June 31st.

PLANTING TOMATOES (Idem).—It is of little use planting Tomatoes out of doors until the middle of June; but the seeds should be sown in March or April—that is, for cold positions north of London. We are glad you have noticed what we said about thinning them. It should have been referred chiefly to the foliage. As soon as the bunches of fruit show we stop the shoots above them, and the foliage grows so fast that we frequently thin it and shorten it, so as to expose the fruit more to the sun. The stems are so succulent that, like Nasturtiums, they will bear a good deal of disleafing and be the better of it—that is, if the roots have rich materials to grow in. In large clusters we have frequently removed the smaller fruit, but the thinning has reference chiefly to the foliage. We are glad the mistake has been alluded to. Those who know how most gardeners have to exercise mind and body at this season, will only be surprised that such mistakes are not more frequent.

FRUIT TREES FOR PEACH-HOUSE (H. E.).—We would have *Violette Hâtive* and *Vanguard* Peaches, and *Elrège* Nectarine, with *Barrington* and *Belle-garde* Peaches for riders. Would it not be well to place the riders on the back wall? Any application of a paint to the Pear trees will be useful in spring. You can do little now except pick off the maggots, and syringe with clear lime water.

THRIPS ON BALSAM LEAVES (An Inquirer).—We found traces of thrips which nothing will remove but smoking, and then well syringing the plants when laid down on a cloth. The rusty appearance on the leaves is chiefly caused by the sun shining on the leaves when moist, from air not being given early. If kept too moist in rich compost they will also be thus affected.

AEALEA GRAFTING (W. H.).—There is no work specially devoted to so slight a topic. Side-grafting is best; grafts not more than 1½ inch long, fastened to the stock with worsted. Best season for the process, early spring. The grafted plants to be kept in gentle heat in a close frame, or under hand-glasses in a propagating-house. The best time for Vine-grafting is early spring. The stock should be in a more advanced stage of growth than the scion.

MUSCAT GRAPES (C. D.).—They are very severely affected with what gardeners call the "spot." It may arise from want of moisture and warmth at the root, as you suggest; but we cannot give a decisive opinion, not knowing the temperature of the house, nor whether the Vines are planted inside or outside.

LAWN—GREENHOUSE (Agnes).—Most probably a little thoroughly decayed stable-manure and earth spread over your mossy lawn would renovate it; but you tell us nothing about the nature of the soil, whether heavy or light. To heat your small greenhouse opening into the drawing-room, no plan would be more simple and manageable than a hot-water pipe passing round it, supplied from a gas-heated boiler. But not having a plan of the greenhouse, nor any other particulars, we can only give this general suggestion.

SULPHUR (A. E.).—Stone sulphur is not more powerful than flowers of sulphur.

EVAPORATING LIQUID MANURE (G. F.).—Mr. D. Thomson and other practical men have testified to the benefit derived by plants in heated structures from having liquid ammoniacal manures put into the evaporating-pans. The ammonia is mingled with the air and stimulates the plants. A little of the ammoniacal liquor from the gas-works mixed with water and put into the evaporating-pans would probably be equally beneficial.

NEW PEA (A. B. C.).—It is impossible to judge comparatively of a Pea without seeing it growing. From the appearance of the pods you sent us we should consider it belonging to the Early Green Marrow class, and, in that case, nearly related to *Prizetaker*, which is only eight days later than *Sangster's No. 1*, and, like yours, grows about 6 feet high. We should like to see the two growing together.

SPOTTED GRAPES (An Inquirer, R. A.).—The Grapes you describe as "damped," are what gardeners call "spotted," and yours are so very severely. You were wrong to syringe the Grapes after they had begun to colour. You could banish the thrips by fumigation, and keeping the air of the house moist by frequently watering the path and syringing the brick-work. If the roots are outside water them, put mulch over them at night, but remove the mulch during the day if fine and warm. It may be, whether inside or outside, that the roots have descended too deeply. In that case, lifting the roots in autumn to nearer the surface will be your only remedy.

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

POULTRY SHOWS.

JULY 19th, 20th, 21st and 22nd. NEWCASTLE-UPON-TYNE. Secs., Mr. Wm. Trotter, Bywell, and Mr. J. Shorthose, Shieldfield Green, Newcastle-upon-Tyne. Entries close July 2nd.

AUGUST 2nd. NEWMILLERDAM. Secs., Mr. J. Turner, Walton, and Mr. W. Pashley, Newmillerdam.

AUGUST 13th. WAKEFIELD AND WEST RIDING. Sec., Mr. J. Crosland, jun. Thorne's Lane, Wakefield. Entries close August 4th.

AUGUST 17th. COTTINGHAM. Sec., Mr. Joseph Brittain.

AUGUST 18th. BURNLEY. Sec., Mr. R. Whitam. Entries close Aug. 6th.

AUGUST 22nd, 23rd, 24th, and 25th. ALEXANDRA PARK. Poultry, Pigeons, and Rabbits. Sec., Mr. William Houghton. Entries close July 23rd.

AUGUST 27th. HALIFAX AND CALDER VALE. Sec., Mr. W. Irvine, Holmfild, Ovenden, near Halifax.

AUGUST 30th. POCKLINGTON. Sec., Mr. T. Grant. Entries close Aug. 22nd.

AUGUST 31st. DEWSBURY. Sec., Mr. F. Aked.

NOVEMBER 28th, 29th, 30th, and DECEMBER 1st. BIRMINGHAM. Sec., Mr. J. B. Lythall, 13, Temple Street. Entries close November 1st.

RULES FOR JUDGING POULTRY.

I HAVE been much surprised several times at articles in *The Poultry Chronicle* ridiculing the idea of judging poultry by

rules; and still more surprised that such articles apparently received, not your sanction only, but approval. I cannot understand how any one can for a moment seriously argue that poultry cannot be judged by rule.

It must be conceded that certain characteristics are essential to certain varieties of poultry. For instance: the Spanish fowl must have a white face and black plumage; the Polish a crest and so on. Put in other words, it is a rule that a fowl, to pass as a Spanish fowl, must have a white face; to pass as a Polish, a crest.

Does your correspondent who most persistently ridicules rules mean to say that he judges haphazard, and that no rules guide him? Surely he must have in his head some rules by which he determines which pens shall receive the prizes; and if so, what possible objection can there be to these rules, if correct, being reduced to writing and forming a code for poultry judging. I am surprised at Mr. Hewitt being opposed to written rules, for he evidently judges by rules. I know of no higher praise I can bestow on a judge, and can have no kind of reason for objecting to rules being written.—P.

[That Dorkings must have five claws, Spanish white faces, Polands crests, and so on, no one denies; those are the essential distinctive characteristics of the varieties, and no one suggests that their absence ought not to disqualify a bird; but when rules are attempted as to non-essentials, then we consider them objectionable. When condition has to be balanced against better uniformity in size, or when any one excellence has to be weighed against other excellencies in competing pens, then we say rules are objectionable, and the decision should be left to the judgment of the awarder.]

JUDGES AT THE APPROACHING ISLINGTON POULTRY SHOW.

THE correspondence of Mr. Tudman on the appointment of judges to the forthcoming Islington Poultry Show having left the matter in anything but a satisfactory position, I feel that some further explanation is due to exhibitors who are not members of the Club; and as one belonging to that class, I wish to be informed in the first place, whether Mr. Tudman acts from his own responsibility in such appointments, or under the direction of a Committee? I ask this not only because it does not appear that any other parties were associated with Mr. Tudman in the recent appointment; but further, because at the Ulverston Show, which, if I am correctly informed, was under the auspices of the Club, after the appointment of the judge had been made public, a member of the Committee wrote in the public papers to inquire by whose authority such appointment had been made, as he had not only not been consulted on the matter, but was altogether ignorant of any proceedings of the Club in connection with it.

A second point which requires clearing up is the statement of Mr. Tudman, that no judge was appointed; when, as it now appears, Mr. Hewitt had been engaged for the office. To say that the communication to that gentleman was a private one is no explanation of a statement which, as it now stands, is at direct issue with the fact. Besides, what possible objection could there be to the appointment being known? On the contrary, one would have thought that the interests of the Club would have been promoted by the fact of the Club having secured the services of that gentleman being made public. I am strongly impressed that the cause of Mr. Tudman's quarrel with you is not the publication of the circumstance of the appointment, but of the fact that the Club's rules for judging have broken down; showing as it does, that to secure the services of any one in whom the exhibitors have confidence, the rules they have elaborated have had to be sacrificed. But if the rules are to be suspended in Mr. Hewitt's case, under what arrangement are his colleagues to judge? and if the latter are to judge by the rules of the Society, how are their decisions to harmonise with his? Or, is Mr. Hewitt to judge certain classes only? If so, the exhibitors ought to know which those are.

In looking over the regulations, I find in No. 4 certain conditions prescribed according to which prizes are to be accorded. Can you inform me who are the parties who framed this rule? or whether it has emanated from the

Poultry Club? as the prize list is altogether silent on the subject.

I need not explain that no exception is intended in this communication to the appointment of Mr. Hewitt, of the value of whose services I am fully sensible, especially in connection with such a Show as the Islington one. Indeed, the absence of Mr. Hewitt as judge in an exhibition on so large a scale would destroy confidence in its success.

I have only to add, that if the three members of the Club selected for judges, of whom Mr. Tudman speaks as the most extensive breeders and successful exhibitors in the kingdom, are still in the practice of exhibiting, they are among the most objectionable parties to fill the office. In proof of this I need only instance the proceedings at the last Birmingham Show, a recurrence of which I should be very sorry to witness. In the present state of matters it would, perhaps, be most satisfactory to exhibitors who are not members of the Club, that the appointment of the judges to act with Mr. Hewitt in the forthcoming Show should be left in the hands of the Manager, he being a gentleman in whose experience and honour such exhibitors have the fullest confidence.—AN EXHIBITOR.

SUCCESSFUL POULTRY KEEPING.

I SEE many of your correspondents are complaining of want of success in chicken-rearing this season. I give the following as my experience:—

COCHIN.			
January 15th.—11 Hatched	.....	7	Reared.
April 16th.—9 "	.....	9	"
" 18th.—9 "	.....	8	"
" 24th.—11 "	.....	8	"
May 4th.—5 "	.....	5	"
" 12th.—9 "	.....	9	"
54 "	.....	46	"
SPANISH.			
June 7th.—9 Hatched	.....	9	Reared.
" 14th.—6 "	.....	6	"
15 "	.....	15	"

The first have been laying for just a month. The second and third average 4 lbs. 8 ozs. each. Perhaps you will tell me if that is not an excellent weight. [Certainly.]

I feed my adult fowls early in the morning (at this season 6 A.M.) on wheat, and twice afterwards on a mixture of 1 cwt. coarse oatmeal, 2 bushels of bran, and 1 sack of fine barley-meal, and find them thrive and lay gloriously. They have also lettuce *ad libitum*.—A COUNTRY POULTRY-KEEPER. Bridport.

THE POULTRY AT LINTON PARK.

THERE may be some among your readers who are not unwilling to hear a few words concerning Linton and its feathered inhabitants.

To begin. The park stands on a long hill side, the lower portion advancing into the valley, whilst the upper recedes over the plateau to the north. Soon after entering the gates a confused crowing—from what quarter it is not easy to say—strikes upon the ear, and on casting the eye around small shepherd-looking huts are seen at long distances apart. But before proceeding further we must make the acquaintance of John Martin, a taciturn man with an honest face, a cart-manner, and a house and salary the envy of all the curates around. He is the guardian of Lady Holmesdale's famous birds, and of his own counsels too; for if wrinkles there be in exhibiting, you might as well attempt to extract them from him as information from John Scott's confidential lad the night before the Derby.

Let us walk round with him, and a long walk it is; for about twenty bottomless huts, moveable on rollers, are scattered about the park near a few trees, the corner of a cover, or any such slight shelter, and each contains its independent colony. Here may be seen a score of lean-looking Spaniards foraging about; there a detachment of portly Dorkings; whilst high up on the bleak and windy hill top live a large family of Pencilled Hamburgs, clean active birds, wild as hawks, requiring all the blandishments of their keeper's voice and a liberal distribution of corn to

induce them to approach the unwelcome stranger. Nearer home some more Hamburgs reside, and a few maternal Cochins—fluffy tame domestic creatures, willing to make any one's acquaintance, and grateful for the smallest contribution.

But where are the poultry-houses, where her ladyship's pampered bipeds spend their lives in idleness and luxury? Where are the prize birds? "All about. He took fust at Islington, Birmingham, Manchester. His brother choked himself last week after I had refused thirty-five sovereigns for him the week before that. He's worth forty," replies Martin, pointing to a monstrous cockerel with a briar-scratched comb and disordered plumage. True it was there running wild. One feed a-day, picking up a precarious existence on grass and insects, roosting in the trees or in their little draughty huts, with less care than the vilest barndoor, during the coldest nights of winter, live and thrive the Linton poultry. Nothing can look simpler than the process. The least possible deviation from a state of nature appears to a tyro the sole secret of success.

Nor is there much stress laid upon breeding from "cup" birds. Out of hundreds the trios are selected on which it is shrewdly surmised the experienced eyes of Messrs. Hewitt, Baily, and Co. will most love to dwell, and on them a brief season of care is bestowed, under which the rough-and-ready customers of the park and shrubbery improve into the sleek and ponderous champions we have so often seen, maintaining in the hour of trial the honour of the county of Kent.—A PULLET.

RIPON AND CLARO AGRICULTURAL SOCIETY'S POULTRY SHOW.

THE fourth annual Meeting of this Society was held at Ripon, July 5th. Compared with last year, it exhibited a decided superiority in regard to quality.

GAME.—First, C. W. Brierley, Middleton, Manchester. Second, Miss E. Beldon, Bingley.
SPANISH.—First, Miss E. Beldon. Second, W. Elliot, Thirsk.
DORKING.—First, J. White, Northallerton. Second, Miss E. Beldon.
POLAND.—First, T. Hough, Bedale. Second, Miss E. Beldon.
COCHIN-CHINA.—First, J. Bell, Thirsk. Second, C. W. Brierley.
HAMBURGH (Golden-spangled).—First, Miss E. Beldon. Second, J. Walker, Knaresborough.
HAMBURGH (Silver-spangled).—First, Miss E. Beldon. Second, C. Cowburn, Leeds.
HAMBURGH (Golden-pencilled).—First, Miss E. Beldon. Second, C. W. Brierley.
HAMBURGH (Silver-pencilled).—First, Miss E. Beldon. Second, W. E. Baynes, Bedale.
BANTAMS (Golden-laced).—First, Miss E. Beldon. Second, R. White, Bilton.
BANTAMS (Silver-laced).—First, C. W. Brierley. Second, Miss E. Beldon.
BANTAMS (Game).—First, J. Wade, Leeds. Second, Miss E. Beldon.
BANTAMS (Any other variety).—First, Miss E. Beldon. Second, J. Wade.
TURKEYS.—First, C. W. Brierley. Second, J. Greaves, Clothesholme.
Ducks (Aylesbury).—First, Miss E. Beldon. Second, J. G. Milner, Leyburn.
Ducks (Rouen).—Prize, Miss E. Beldon.
DUCKS OF ANY BREED OR CROSS.—First, C. W. Brierley. Second, Miss E. Beldon.
EXTRA STOCK.—Prize, J. White, Northallerton.
PIGEONS.—Carriers (Any colour).—Prize, Miss E. Beldon. **Tumblers (Almond).**—Prize, Miss E. Beldon. **Tumblers (Any other variety).**—Prize, Miss E. Beldon. **Pouters.**—Prize, Miss E. Beldon. **Runts.**—Prize, J. Wade. **Jacobins.**—Prize, Miss E. Beldon. **Fantails.**—Prize, R. H. Walbran. **Owls.**—Prize, W. Hughes, Leeds. **Trumpeters.**—Prize, Miss E. Beldon. **Barbs.**—Prize, Miss E. Beldon. **Turbits.**—Prize, Miss E. Beldon. **Nuns.**—Prize, Miss E. Beldon. **Dragoons.**—Prize, G. Sadler, Boroughbridge. **Balds or Beards.**—Prize, Miss E. Beldon. **Archangels.**—Prize, Miss E. Beldon. **Any New or Distinct Variety.**—Prize, Miss E. Beldon.

Judges of Poultry.—Mr. H. C. Mason, Drighlington, Leeds; Mr. M. Hunter, Greenhammerton, York.

[We think this should be distinguished in the Society's Annals as "Emily Beldon's Year."]

ALEXANDRA PARK SHOW OF POULTRY, &c.—The entries for this Show, we are informed, will not close until Saturday, July 23rd, instead of the 16th.

IMPORTATION OF EGGS.—It is a startling fact, that in fourteen years the importation of eggs into this country has increased more than one hundred and sixty-nine millions. In 1849 there were imported 97,745,849, and in 1863, 266,929,680. The wholesale price in France is 6s. for ten dozen.

SNATH AGRICULTURAL SOCIETY'S POULTRY SHOW.

The tenth annual Exhibition of the above Society was held on July 7th, in the spacious and beautiful grounds of Mrs. Shearburn.

The following were the prizes awarded:—

SPANISH.—First, W. Cannan, Bradford. Second, W. Houseman, Tadcaster. *Chickens.*—Prize, F. Powell, Knaresborough.
DORKINGS.—First, T. E. Kell, Wetherby. Second, T. B. Ireland, Tadcaster. *Chickens.*—Prize, T. E. Kell.
COCHIN-CHINA.—First, W. Cannan. Second, R. Dewes, Knaresborough. *Chickens.*—Prize, R. Dewes.
MALAY.—Prize, O. A. Young, Driffield. *Chickens.*—Prize, O. A. Young.
GAME COCK.—First, R. Bickers, Beverley. Second, T. B. Ireland. *Game Hens.*—First, J. Harrison, Holbeck. Second, T. B. Ireland. *Game Chickens.*—Prize, J. Barker, jun., Dunsington.
PREMARANTS (Golden).—First and Second, W. Cannan. *Chickens.*—Prize, G. Snowden, Tockwith.
PREMARANTS (Silver).—First and Second, W. Cannan. *Chickens.*—Prize, W. Cannan.
HAMBURGERS (Golden-pencilled).—First and Second, W. Cannan.
HAMBURGERS (Silver-pencilled).—First and Second, W. Cannan.
CRISTEFRAT OR CORNICAN.—Prize, W. Cannan.
POLANDS (Any variety, with or without ruffs).—First, W. Cannan. Second, O. A. Young.
ANY BREED OR CROSS.—First, F. Powell. Second, H. Lacy, Hebden Bridge. *Chickens.*—Prize, Mrs. Moore, Boston Spa.
BANTAMS.—First, T. E. Kell, Wetherby. Second, The Right Hon. Lady Londesborough.
COCK (Any Breed or Cross).—Prize, W. Cannan.
HENS (Any Breed or Cross).—Prize, T. E. Kell.
GEES.—First, O. A. Young. Second, W. K. Goodbarne, Tadcaster.
DUCKS (Any Breed except Aylesbury).—First, O. A. Young. Second, W. A. Park.
AYLESBURY.—First, W. Cannan. Second, O. A. Young.
TURKEYS.—First, W. Cannan. Second, Miss Walton, North Milford.
GUINEA FOWLS.—Prize, O. A. Young.

J. Richardson, Esq., of Thorne, officiated as Judge.

BELFAST POULTRY EXHIBITION.

(From a Correspondent.)

The above Show came off on the 6th, 7th, and 8th of July, and our anticipations were fully realised. Amateurs supported the Exhibition in every way. All things were very comfortable, clean, and pleasant, there being plenty of light and air, and the pens were in a single row almost throughout. The Belfast market for butter and eggs is very extensive and covered in all round, and not a better place could be desired at this season of the year. This Society offer a £10 cup to be competed for by, and awarded to, the exhibitor most successful in gaining first prizes during three years. Mr. Beldon the great Yorkshire exhibitor, and Mr. Boyle, of Dublin, were competitors for this; and Mr. Beldon, who took ten first prizes, won the cup; Mr. Boyle gaining nine prizes. It must have been very instructive to other exhibitors to see such stock as shown here. Mr. R. Palmer Williams, and Mr. F. W. Zurhorst each showed very creditably.

Dorkings were the first on the list. There were eighteen pens and all very pretty. *Dorkings* were not good on the whole. The prize *Spanish* were far a-head of all others. *Cochins* were strong, and if we may speak our minds it was the only class in the Show in which a fault could be found in the judgment. It was the general opinion that the second prize should have been first, and a splendid pen of *Whites* second. A pen made up of *Partridge* and *Grouse* took first; the Yorkshire Judge had to give way to the faulty pen. *Brahmas* were very beautiful and formed a strong and attractive class. It is another of the curiosities of poultry and poultry showing that the *Hamburgs* are never good alike. As they were here, Mr. Beldon took the lead in all the classes; the Judges all agreed that there was not another pen in the Show, except the second-class *Golden-pencilled*, worthy of a second prize, but the Committee ordered all prizes to be awarded. *Game* were very poor except the first-prize *Black Reds*. *Polands* were strong but very poor except the first-prize pens. *Bantams* were very poor. Than the *Turkeys*, *Geese*, and *Ducks* shown by Mr. Boyle we do not expect to meet better. As will be seen by the prize list, he took all the first prizes.

DORKING.—First and Third, Col. Leslie, M.P., Castle Leslie, Glasslough. Second, R. P. Williams, Glaslough, Fairview, Co. Dublin. *Chickens.*—First and Second, R. P. Williams, Glaslough, Fairview. Third, Col. Leslie, M.P.
SPANISH.—First, H. Beldon, Gilstead, Bingley, Yorkshire. Second, G. Martin, Glenview, Belfast. Third, R. W. Boyle, Rosemount, Dundrum,

Co. Dublin. Commended, R. P. Williams. *Chickens.*—First and Second, R. W. Boyle, Rosemount, Dundrum. Third, C. E. M'Clinck, Millmount, Randalstown.

COCHIN-CHINA.—First, F. H. Lewis, Nettlefield, Belfast. Second, H. Beldon. Third, F. W. Zurhorst, Belville, Donnybrook, Dublin. Highly Commended, F. Langtry, Malahide; F. W. Zurhorst.

BRAMA FOOTRA.—First and Second, R. W. Boyle. Third, F. W. Zurhorst.

SCOTCH GREYS.—Prize, G. Martin, Glenview, Belfast.

HAMBURG (Silver-spangled).—First, H. Beldon. Second, R. P. Williams. Third, F. H. Lewis.

HAMBURG (Silver-pencilled).—First, H. Beldon. Second and Third, F. H. Lewis.

HAMBURG (Golden-spangled).—First, H. Beldon. Second, J. Montgomery, Wolfhill, Belfast. Third, G. Martin, Glenview, Belfast.

HAMBURG (Golden-pencilled).—First, H. Beldon. Second, R. W. Boyle. Third, F. H. Lewis.

GAME.—First, G. Langtry (Black Reds). Second and Third, F. H. Lewis (Black Game).

BANTAMS (Game).—First and Second, F. H. Lewis. Commended, F. H. Lewis.

BANTAMS (Any other Breed).—First, R. Niven, jun., Chrome Hill, Lisburn (Sebright Bantams). Second, J. Wilson, Carrickfergus (Sebright Bantams).

SINGLE COCKS.

DORKING.—First, F. H. Lewis, Nettlefield, Belfast. Second, Col. Leslie, M.P., Castle Leslie, Glasslough. Commended, Lord Lurgan, Brownlough House, Lurgan.

SPANISH (Black).—First, H. Beldon, Gilstead, Bingley, Yorkshire. Second, C. E. M'Clinck, Millmount, Randalstown.

HENS.

DORKING.—First, Col. Leslie, M.P., Castle Leslie, Glasslough. Second, R. W. Boyle, Rosemount, Dundrum, Co. Dublin. Highly Commended, G. Langtry, Montague House, Malahide. Commended, F. H. Lewis, Nettlefield, Belfast.

SPANISH (Black).—First, H. Beldon, Gilstead, Bingley, Yorkshire. Second, E. M'Clinck, Millmount, Randalstown.

COCHIN-CHINA.—First, F. W. Zurhorst, Belville, Donnybrook, Dublin. Second, F. H. Lewis.

BRAMA FOOTRA.—First, R. W. Boyle. Second, F. H. Lewis.

FOWL WITH CRESTS.

POLAND (White-crested Black).—First, H. Beldon. Second, F. H. Lewis. Third, G. Martin, Glenview, Belfast.

POLAND (Silver-crested Spangled).—First, H. Beldon. Second and Third, F. H. Lewis.

POLAND (Golden-crested Spangled).—First, H. Beldon. Second and Third, F. H. Lewis. Highly Commended, R. P. Williams. Commended, G. Martin.

EXTRA STOCK.

BANTAMS (Gold-laced).—Prize, R. Niven, jun., Chrome Hill, Lisburn.

TURKEYS.—First, R. W. Boyle, Rosemount, Dundrum. Second, R. Mehauff, Clontarf, Newtownbreda. (Good).

GEES.—First, R. W. Boyle. Second, H. L. Prentice, Caledon (White). Third, R. W. Boyle. (Out of feather.)

DUCKS (Aylesbury).—First, R. W. Boyle. Second, R. P. Williams. *Ducklings.*—First, R. W. Boyle. Second, R. P. Williams. Third, W. Charley, Seymour Hill, Dunmurry.

DUCKS (Beuen).—First, R. W. Boyle. Second, H. L. Prentice, Caledon. Third, R. P. Williams. Highly Commended, J. Montgomery, Wolfhill, Belfast. Commended, G. Martin, Glenview, Belfast. *Ducklings.*—First, R. W. Boyle. Second, G. Martin, Glenview, Belfast. Third, J. Wilson, Carrickfergus.

The following gentlemen were the Judges:—Mr. John Crosland, jun., Mr. Patterson, and Mr. Williams.

MORTALITY AMONG CHICKENS.

LIKE "A. K. C.," I considered myself no novice in poultry-rearing, and like him I have had my disappointments and vexations in rearing chickens. Although I well knew how to rear them for the table and stock, and had learnt to my cost that over-feeding and filth were the great and immediate plague to poultry, yet, notwithstanding all my knowledge, how puzzled and vexed was I with my chickens dying in the very same manner your correspondent describes after every stimulant had been offered.

Without entering into details, I concluded that the cold had something to do with it. I immediately erected a shed well closed in, with a glass window, close to the ground, looking south, and put all the necessities of chicken life therein. The floor I spread with clean dry straw about 1 foot deep, and then placed my chickens in this shed.

The result was that they gave up dwindling, and were soon healthy chickens. The dry straw and a few grains of wheat scattered throughout were the best preservatives to chickens that had come under the notice of—A LAMARKIAN BEE-KEEPER.

I may also state that I found it easier to rear chickens in the early spring months than in May, June, or July. The dewy mornings then proved always fatal.

NEW VARIETIES OF PIGEONS.—I am very much obliged to your Bingley correspondent for his description of "Brun-

wicks" and "Satinettes." His opinion quite agrees with mine—namely, that the Brunswicks are only one of the varieties of Priest Pigeons, and the Satinettes are a spangled-shouldered variety of Turbits. I do not know anything of the green Pigeons described by Dr. Livingstone, but no doubt they are a distinct species from the domestic Pigeon.—B. P. BRENT.

GOOSE BREEDING.

As Geese are long-lived, so they are long in reaching maturity, not becoming good for breeding purposes before they are from three to five years of age. The third or fourth year is as early as is desirable to mate Geese for this purpose. Then having selected the best of their kind, one gander to no more than two Geese (and some males will only mate with one female), and the gander not related to the Geese, the breeder may consider that he is supplied with a good breeding stock for at least the next twenty years, or, as one writer says, "for life."

In confirmation of this statement, Mr. S. Jaques, jun., of Boston, Massachusetts, wrote, in 1850, of a Bremen Goose that his father imported in 1821: "She has never failed to lay from twelve to sixteen eggs every year for the last twenty-seven years, and has always been an excellent breeder and nurse, as has all the stock and offspring connected with her. I had the curiosity to weigh one of her brood in 1849, when nine months old exactly, and his weight in feather sent up 22 lbs. in the opposite scale." The earlier the goslings are hatched in spring the better, and there is no agent so good for this purpose as the Goose, though the Ducks do very well. Hens appear to have too dry a heat for the purpose, and though a part of the eggs may hatch, the goslings are not as strong as those hatched by the Goose or a Duck. For the first twenty-four hours after hatching, like chickens, the young require no feeding. On the second day they will begin to nibble a little fine grass, or young clover, from a fresh sod placed near the nest. They will also want a little scalded corn meal or oatmeal, or a few bread crumbs, and a shallow vessel of water. If the weather is fine, it will soon do to "turn them out to grass," but they should be housed every night and during stormy weather, on a dry floor, until several weeks old; and the better the young are fed for the rest of the season, the larger and better the fall goslings. Wheat bran or the best class of "shorts" mixed with boiled potatoes makes a good feed for goslings after a few weeks old.—(U.S. Agricultural Report.)

POULTRY, PIGEON, RABBIT, AND CANARY LORE.

I SHOULD be very pleased if Poultry, Pigeon, Rabbit, and Canary fanciers would follow the example set in THE JOURNAL OF HORTICULTURE by the bee-keepers, and interchange in its pages their experiments and experiences. Poultry lore seems now reduced to an account of the prize lists of some of the shows, or an occasional cry from some despairing Brahma fancier; still less is now written on Pigeons, while Rabbits and Canaries are quite forgotten. I am very desirous of seeing more communications on these subjects, and willing to do what I can in the cause.—B. P. BRENT.

[Our wish is an echo of Mr. Brent's. Our columns are open to the fanciers of all the pets enumerated by him, and we wish that one and all would communicate their modes of management, observations on their merits, diseases, or other relative topics.—EDITORS.]

PRIDE IN FOWLS.—Fowls have plenty of vanity and pride. They are very sensible to admiration from man, and miss accustomed notice. The queen of the poultry-yard must eat first, and stand by the king at feeding time. She resists any invasion upon her rights, and will have a precedence in all things. Indeed, precedence in the court-yard seems as valued as at earthly courts. Age and priority of residence in the yard, not less than size and strength, constitute right to precedence. No dowager ever treated young chits of girls

more contemptuously than the senior hen treats her juniors. One has heard of a Swiss cow which died of vexation when her bell was taken from her. So did a hen of mine, long mistress of the poultry-yard, die of smothered pride, when a new queen-hen, partner to a new king (a pair I bought at a poultry show), came into my enclosure. The rival queens eyed each other for a moment steadfastly, then rushed to the combat. The new comer, though the old hen fought bravely, was the stronger. Mrs. Mercury, as we called the old hen, from the wing-like feathering on her legs, never attempted to try her chance again, succumbed in a melancholy manner, and after a few days' moping gave up the ghost.—(All the Year Round.)

[NOTE BY ED. C. F.—The above is no fiction. We had a beautiful Bantam cock, which died of mortified pride. A Black Spanish cock was uncouped in the same yard in which the Bantam was strutting about, when the latter attacked the new comer with beak and nail. The Spaniard treated the little fellow with cool contempt, and from that moment the Bantam pined, drooped, refused food, and at length died.]—(Canada Farmer.)

ANTWERP PIGEONS.

IN accordance with the request of "PARVO" I will endeavour to describe the properties of the various breeds of Pigeons known as "Antwerp Carriers."

The inhabitants of Belgium have long been famous for Pigeon-flying, and consequently we find among them several very superior strains of homing birds. The basis of these breeds, it would appear, was a cross between the Dovehouse Pigeons, or Rocks, and Tumblers. Such birds, known as Volans and Voyageurs, are common on the continent, and are esteemed for their high flying. Such Pigeons having strayed or been lost have betaken themselves to the lofty towers and steeples of the churches, &c., in the larger towns, where they have had for ages to take care of themselves, and run the gauntlet against all sportsmen and birds of prey, which are tolerably numerous; and it is easy to understand that the remnant of such a breed would be pre-eminent as homing birds, and such, I am informed, is the origin of the real Antwerp Carrier Pigeon. I can only describe the breed as a small mealy Rock, which colour greatly predominates among the Dovehouse Pigeons thereabouts.

The true Antwerp is in shape much like a Rock or Dovehouse Pigeon, but rather sligher built, bolting eye, and clean sharp-looking head.

Many other kinds are bred; for instance, about Liège the Owl form predominates. The Smerles, as they are there called, are very much like an Owl Pigeon, their colours being mealy, red or blue chequered, and sometimes blue. This breed is even more widely diffused than the Antwerp. Their powers of flight are extraordinary; and, from some accounts of Pigeon-flying, I have computed that they home at the rate of forty-seven miles an hour. I do not know that there are any very particular points of outward appearance, but their homing faculty is their main recommendation. These Smerles have been crossed with the English Dragoon, and have produced a stronger and stouter bird.

I have also heard of Blue Pigeons, with feathered feet, of excellent homing qualities, brought from Antwerp; and, doubtless, in a country so famous for flying Pigeon races, there are many choice strains that are little known except to their proprietors, particulars of which I am quite unable to give.—B. P. BRENT.

BEEES IN LINCOLNSHIRE.

AS I some time ago troubled you with a chapter of lamentations, it is but fair that I should let you know something of my better success. The season in this neighbourhood has been a most wretched one so far as multiplication by natural swarming is concerned, though a good one for honey-harvesting. Few bee-keepers have had more than about one swarm from every six hives which they possessed, and very many have had none at all. My last autumn and winter's disasters left

me with just two hives in good condition—a Nutt's collateral that has stood three years, and a common cottage-hive that has stood four years. I had intended to get a couple of first swarms naturally from them, and then to unite the later swarms if any, and finally transfer the old stocks into bar-frame hives, as I intend to use none others in future. The bad season for swarming, however, quite frustrated this intention. They hung out till I was tired of watching them, and resolved to get artificial swarms by driving and transposing. The result has surpassed my most sanguine expectations, and not only are the driven swarms first-rate (of course I allowed a fortnight's interval after driving the one before operating similarly on the other), but the stocks are also in prime condition. I only regret that I did not adopt this course a month earlier than I did. After driving the first, the old stock in its transposed condition hung out strongly the day afterwards. Of course, it has since been used only for transposition.

My friend "E. B." very kindly sent me a Ligurian queen a short time since, and which I successfully placed at the head of a stock by a process which I have never seen described, and, therefore, to me quite original. The said queen arrived just after driving and transposing my two stocks; and as I was unwilling to interfere with either of them or the swarm so soon, if I could avoid it, I made an arrangement with a bee-keeper in the neighbourhood for one of his stocks, which had been hanging out for some time. Having a bar-hive untenanted that was two-thirds filled with healthy comb and a considerable quantity of honey, I transposed it with the stock at about 11 A.M. when fully at work. The returning bees of course entered it, and a state of great excitement naturally ensued. In an hour I placed a box over the top, containing the Ligurian queen and about a couple of dozen of her subjects, the box having a moveable top of glass, and a moveable bottom of perforated zinc. The excitement slightly abated on this being done, and I left her so till 3 P.M., when I took her own subjects away, and then allowed one bee to enter from below. Perceiving that it behaved most affectionately to her (if it had not, its death warrant had been sealed instantly), I admitted a few more, one at a time; and finding that they all appeared doubly affectionate, at last I withdrew the slide altogether, and allowed them all to descend. Work recommenced vigorously at once, and plenty of bees from the old stock joined them during the succeeding two days, and the result is a fine swarm headed by a Ligurian queen.

There is an old proverb that "It never rains but it pours," for, on the very day that this queen arrived, a beautiful Ligurian swarm, with queen born in Italy, arrived through the kindness of a relative who is, however, not himself a practical apiarian. It was on arrival transferred into a bar-frame hive and is doing remarkably well; so you see that being quite free again from foul brood I am once more in a favourable condition.—G. F. B., *Spalding*.

EXTRAORDINARY LIGURIAN SWARMS.

I WONDER whether I shall astonish you as I have done all about here when I tell you that the eight-pound swarm of mine in May (Ligurian), cast again for the third time on Wednesday, July 5. On the previous Saturday the bees flew out as though swarming, and on examination I found a dead queen; yet on Wednesday they swarmed in spite of a super. The grandmother on examination proving to have no queen, I have joined this one to her, otherwise I should have liked to have kept for a curiosity a third virgin swarm.—A NORTHUMBERLAND BEE-KEEPER.

[The fecundity of this monster Ligurian swarm has evidently been quite on a par with its unprecedented magnitude.]

LIGURIANS IN AYRSHIRE.

My Ligurian hive having thrown a very fine swarm yesterday (10th July), a thing far beyond my expectation two weeks ago, I must pronounce Ligurians superior to blacks in multiplication. I can now see no means of getting the young queens impregnated with Ligurian drones, but will

carry my after-swarms to the country, where they will be a reasonable distance from blacks.—A STEWARTON APIARIAN.

[The old stock should, of course, accompany the after-swarms in their country excursion; nor should the first swarm be left behind if it contain drones, as is probably the case.]

COOKING MEATS.—Every wife and mother owes it to herself, her husband, and her children, as well as to society at large, to prevent waste in every department of the household, whether provisions are cheap or dear, whether the husband is rich or poor: for waste is a crime against humanity, an insult to the bounteous Hand which "giveth us all things, riches to enjoy." On the other hand, a true economy is one of the wisest, the best, and ennobling of domestic virtues. A hundred careful experiments were made in England in reference to roasting and boiling meats in order to ascertain the respective losses. Roasted chickens lost 15 per cent.; beef ribs and sirloins, 19 per cent.; geese, 19 per cent.; boiled mutton legs, 10 per cent.; boiled beef, 15 per cent.; boiled shoulder of mutton, 28 per cent.; turkeys lost 20 per cent.; mutton legs and shoulders, 24 per cent.; ducks, 27 per cent. Boiling beef saves more than 4 per cent. over roasting. If a leg of mutton is boiled it loses 10 per cent.; if roasted, 25 per cent.?" The fatter meat is, the greater the loss; it should be moderately fat, to make it tender; but there is an unprofitable fatness. Eleven pounds of roast beef rib lose 2 lbs. and the bones 1 lb., so that of 11 lbs. bought only 7 lbs. come to the table. Hence if roast rib pieces cost in New York, in April, 1864, 20 cents a pound at the butcher's stall, it is more than 31 cents a pound on the dinner-table. It is philosophically true that 1 lb. of clear roast beef is more concentrated than 1 lb. of boiled beef, has less water in it, and hence may contain more nourishment; but the more concentrated food is, the more unwholesome it is, not only because it requires a greater digestive power to convert it into pure blood, but the sense of sufficiency at meals is induced to a considerable extent by the bulk of what is taken, and if we eat concentrated food until there is bulk enough to remove the feeling of hunger, there is so much nutriment in it that nature can't extract it all in a perfect manner; hence there is not only too much nutriment for the wants of the system, but all of it is imperfectly prepared and we really get less of the strength and less pure blood out of it, than if much less had been eaten, or it had been taken in a more bulky, or, if you please, in a more watery condition. This is the reason why dyspeptics and others eat a great deal, but they do not get strong. But if there is too much bulk, there is not enough nutriment although a great deal is taken into the stomach. Porter and beer, for example, fill up the stomach, and seem to make persons fleshy, but there is little nutriment and great bulk; great beer-drinkers are never strong but are puffy.—(*Hall's Journal of Health*.)

OUR LETTER BOX.

SUPERIORITY OF THE LIGURIAN BEE (*A. K. C., Dunsley*).—This new species is unquestionably far superior in fecundity, good temper, and beauty to the common hive bee.

LIGURIAN BEES—A WINDOW APIARY (*M. B., Hampton*).—Write to T. Woodbury, Esq., Mount Radford, Exeter. Bees will very probably do well in an upper room, but we do not think it possible to avoid the occasional loss of swarms from such a situation.

MAIDEN SWARMS (*H. P., North Lincolnshire*).—Two swarms from a swarm of the current year are unusual but not unprecedented.

UNITING WEAK STOCKS (*A Constant Subscriber*).—Blow a little smoke into each, and after allowing them two or three minutes to enable the bees to fill themselves with honey, invert one hive in a pail, and surmount it with the other, then drive the inhabitants of the lower hive into the upper one, and the union will be complete. This operation should be performed in the daytime, and, if adroitly managed, need not occupy many minutes.

TRANSFERRING BEES (*A Constant Reader*).—Although more than one swarm may generally be looked for, the rule is by no means invariable. If you mean to break up the stock it should be done in the autumn when the honey harvest is over, and little brood exists. Any attempt to transfer the bees to a Payne's-hive at this time would probably end in their entire destruction. Comb-building in an upward direction is not at all unusual.

BUTTER IMPORTED AND EXPORTED (*Essex*).—Last year 986,708 cwt. were imported, and 102,406 cwt. exported.

WEEKLY CALENDAR.

Day of Month.	Day of Week.	JULY 26—AUG. 1, 1864.	Average Temperature near London.			Rain in last 37 years.	Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock before Sun.	Day of Year.
			Day.	Night.	Mean.								
26	Tu	Common Star Thistle flowers.	73.4	51.0	62.2	18	17 at 4	55 at 7	15 11	43 1	22	5 12	208
27	W	Dwarf Elder flowers.	74.5	51.6	63.1	17	16 4	54 7	14 11	50 2	20	6 12	209
28	Th	Sheep's Fescue Grass ripe.	76.9	51.7	64.3	19	20 4	53 7	morn.	53 2	24	6 11	210
29	F	Fennel flowers.	76.7	50.9	63.8	16	21 4	51 7	35 6	46 4	25	6 9	211
30	S	Gipsy Wort flowers.	74.9	50.8	62.9	16	23 4	50 7	31 1	51 5	26	6 7	212
31	Sun	10 SUNDAY AFTER TRINITY.	74.9	50.8	62.8	14	24 4	48 7	28 2	11 6	27	6 4	213
1	M	Wormwood flowers.	76.1	50.9	63.5	17	25 4	46 7	29 5	43 6	28	6 1	214

From observations taken near London during the last thirty-seven years, the average day temperature of the week is 75.1°, and its night temperature 51.1°. The greatest heat was 82° on the 26th, 1862; and the lowest cold, 36°, on the 1st, 1861. The greatest fall of rain was 1.39 inch.

A FEW SHOW GOOSEBERRIES.

RED KINDS.



LONDON, raised by Mr. Wilcock, of Acton, Cheshire, and sent out by Mr. John Banks, jun., at the May Pole Inn, Acton, Cheshire, on the last Tuesday in October, 1831, is at the present time the largest red Gooseberry in general cultivation, and has obtained a greater number of first-class prizes than any other kind. Mr. John Flower, of Stoke-by-Stone, Staffordshire, exhibited of this variety at Lower Tean, near Cheadle, Staffordshire, on the 7th of August, 1852, the largest Gooseberry on record—viz., 37 dwts. 7 grains. This variety grows in various forms. The three-veined berries, well managed, will grow from 1½ inch to 2½ inches in length, and from 5 inches to 5½ in circumference. The long ones are generally the best in form,

and are very nearly the same in girth the whole length of the berry, tapering slightly towards the top, which is rather flat and ridgy, with the seed veins lower than the rest of the surface, which gives the ridged shoulders; but the ridges do not extend far from the top, the berry terminating with a round prominent nose. The two-veined berries are similar in form, except that they are flat-sided and often a little longer. The shorter ones are often deficient of seed, more ridgy, and deformed. In colour London is very dark red, almost chocolate, the berry perfectly smooth; flavour tolerable, but not first-class. It makes a spreading bush; the wood is almost smooth, producing but few thorns, and does not do well until the plants are strong. An uncertain cropper, but when caught sound will excel any other kind.

YOUNG WONDERFUL, or **WONDERFUL**, as now called, was raised by Mr. James Sanders, of Marson, Cheshire, and sent out by him at the Crown Inn, Peover, near Knutsford, Cheshire, on the fourth Saturday in October, 1829. This variety was the heaviest berry grown for the following years—viz., in 1832 it was equal with Lion, both being 27 dwts. 13 grains; in 1833, 27 dwts. 17 grs.; in 1834, 27 dwts. 8 grs.; in 1835, 24 dwts.; in 1838, 30 dwts. 16 grs.; in 1841, 32 dwts. 16 grs. This variety is similar in form to London, but shorter, and eight or ten days earlier. It colours better to the top; the skin has a softer appearance, and is strewed with brownish specks. The colour is darker than that of London, and the berry, not so much ridged, is perfectly smooth. Habit of growth upright, short-jointed, with thick shining leaves and short prickles. It breaks early in spring, and is but a shy cropper in some districts. Flavour good.

No. 174.—VOL. VII., NEW SERIES.

COMPANION, raised by Mr. William Hopley, of Wistaston, Cheshire, from a Gooseberry grown by Mr. John Bratherton, of the same place, was sent out by Mr. Hopley, at the Rockwood Inn, Wistaston, Cheshire, on the last Monday in October, 1829. This variety is a general favourite, both as a show kind and for general cropping purposes. In 1836 it was the heaviest berry exhibited of any colour—viz., 28 dwts., and again in 1837, one of the smallest seasons recorded, it was the heaviest grown—23 dwts. 12 grains. Since that time London has taken the lead, except in the years 1838, 1841, 1859, 1862, and 1863. In 1842 Companion was 31 dwts. 5 grains; in 1852 it was 31 dwts. 11 grains. It is a bright light red, very rough, generally two-veined, but plump in form, with one shoulder a little higher than the other, rather square at the top, the nose nicely rounded to the snuff; flavour very fine; ripens well to the top, with nice supple skin; rather early. It makes a fine spreading bush, and is a most prolific bearer, the fruit being much the same size all over the tree.

That fine variety *Antagonist* is a seedling raised from Companion, and turns out to be the largest white berry, and, to all appearance, is likely to be the largest of any colour.

ROARING LION, or **LION**, as it is now called, was raised by Mr. Reuben Farrar, and sent out by him at the Eagle and Child, Whitefield, Lancashire, on the third Saturday in October, 1818, and for some years was the heaviest berry grown of any colour. In 1825, the heaviest berry weighed 31 dwts. 16 grains; in 1828, 29 dwts.; in 1829, 25 dwts.; in 1831, 27 dwts. 6 grains. It is a very long berry, from 1½ to 2 inches long; the three-veined ones are finely formed, but not so ridgy as the London. The two-veined berries are long and rounder than the two-veined Londons. The skin is hard-looking, perfectly smooth, of a deep red colour, the veins of a brownish hue; the stalks are very long and rather fine for the size of the fruit, being much smaller than the stalks of the London. It makes a fine-spreading bush; the wood rather fine, and weeping a little towards the end of the shoots; very vigorous. Flavour not fine.

YELLOW KINDS.

LEADER was raised by Mr. William Piggott, of Moreton, Cheshire, and sent out by him at the Wolf's Head, Congleton, Cheshire, on the last day of October, 1826. This is, in every respect, a first-class variety, and has many times been the heaviest yellow berry shown for the season—viz., in 1829 it weighed 23 dwts. 14 grains; in 1831, 26 dwts. 17 grs.; in 1832, 26 dwts. 9 grs.; 1835, 23 dwts. 12 grs.; in 1837, 22 dwts.; 1838, 26 dwts. 5 grs.; in 1841, 27 dwts.; in 1842, 25 dwts. 10 grs.; in 1843, 28 dwts. 14 grs.; in 1844, 27 dwts. 21 grs.; in 1847, 27 dwts.; in 1856, 24 dwts. 12 grs. I have only named the weight for the years it was the heaviest of its colour. There are few that can excel it at present. This is a plump well-formed berry with fine shoulders, which are prominent. The three-veined berries are very round, the seed veins lower than the rest of the surface; the two-veined ones rather flat-sided, but round-off nicely to the

No. 326.—VOL. XXXII., OLD SERIES.

nose. It has a beautiful soft-looking skin, with a bloom similar to a peach; colour dull muddled yellow; flavour of the finest quality. Makes a fine vigorous bush, growth upright; and a most prolific bearer.

YELLOW GUNNER was sent out by Mr. Hardoncastle about the year 1821, and, I believe, it is of Lancashire origin, but I am not certain as to when and where sent out. It is one of the best old varieties, and was the heaviest yellow berry shown in the following years—viz., in 1826, when it weighed 23 dwts. 4 grains; in 1827, 27 dwts. 1 gr.; 1828, 24 dwts. 5 grs.; in 1833, 25 dwts. 2 grs.; in 1834, 25 dwts. 11 grs. The berry is very round, handsomely formed, and covered with strong rough spines; it is one of the roughest berries grown. In colour it is almost olive green, shaded and blended with a yellow tinge, the veins a little lighter than the rest of the skin. It ripens well, and is of fine flavour. Habit of growth strong and robust, making a fine upright bush.

GOLDEN SOVEREIGN was raised by Mr. John Bratherton, of Wistaston, Cheshire, and sent out by him on the last Monday in October, 1821, at the Rockwood Inn, Wistaston, Cheshire. This was a useful variety for some years, but has long since been surpassed as a show variety. It is of a bright light yellow, of medium length, ripens early, is a free bearer, and of good flavour.

GREEN KINDS.

BUMPER was raised by Mr. John Bratherton, of Wistaston, and sent out by him at the Rockwood Inn, Wistaston, Cheshire, on the fourth Monday in October, 1832. This variety was shown as a seedling, and has weighed 30 dwts. 18 grains; but was soon eclipsed by **Thumper**, sent out by Mr. Richard Kyle, of Wistaston, on the same day. **Bumper** is light green, smooth, of medium length; an early variety, ripens too soon at the nose, and is very subject to shanking in hot weather. Habit rather weak and spreading. At the present day it is useless.

TROUBLE is a long berry, tapering very much towards the stalk. It is rough, and in colour very dark green. Quite useless at the present time for any purpose.

WHITE KINDS.

EAGLE OF THE SUN, now called **RACER**, was raised by Mr. Thomas Cook of Hatherlow, and sent out by him at the Spread Eagle, Hatherlow, Cheshire, on the 1st of November, 1823; and in 1825 it was the heaviest white berry exhibited—viz., 23 dwts. 20 grains; and it weighed as follows—in 1827, 24 dwts. 18 grains; in 1830, 27 dwts. 12 grs.; in 1831, 25 dwts. 18 grs.; in 1838, 23 dwts. 11 grs.; in 1834, 25 dwts. 22 grs.; in 1835, 21 dwts.; in 1840, 24 dwts. 0 grs.; in 1844, 26 dwts.

It is one of the longest berries grown. The three-veined berries are very fine in form, long, smooth, and very round. The two-veined berries are rather flat, and generally a little tapering towards the stalk, which is rather long and small. Colour yellowish white. Makes a fine bush. Wood long and rather fine; bears freely; flavour tolerable.

OSTRICH was raised in the neighbourhood of Wistaston by Mr. James Billington, was sent out by him on the last Monday in October, 1827, and was the heaviest white berry exhibited in 1829, 21 dwts. 11 grains; in 1832, 24 dwts. 20 grains. This variety is very long, rather flat on the side, and seeds badly, consequently seldom weighs well for the size of the fruit. It is a little rough, colour yellowish white; in habit it grows freely, makes a fine spreading bush, and bears well.

WHITE SWAN was raised by Mr. William Wood, and sent out by him at the Grapes Inn, Croston, near Chorley, Lancashire, on the third Monday in October, 1831; and was the heaviest white berry grown in 1838—viz., 24 dwts. 16 grains. The berry is of medium length, very smooth, of a darkish white colour; the veins very conspicuous, being broad and much whiter than the rest of the berry. It makes a fine bush, and bears freely.

It will be seen by the above that very few of the better kinds of show Gooseberries are of Lancashire origin, although so often called "Lancashire Show Gooseberries."—O. LIM-CESTER.

ROYAL HORTICULTURAL SOCIETY'S GARDEN.—In compliance with a wish expressed by Her Majesty the Queen, the

Council have announced that on the 26th of August next, the late Prince Consort's birthday, the public will be admitted gratuitously to the Society's Gardens at Kensington, and that the same tribute to his memory will be continued in after years.

ORCHARD-HOUSE PRODUCE—DESTROYING APHIDES.

FROM an orchard-house, heated in cold weather, in five days last week eighty dozen of Peaches and Nectarines have been gathered for market, besides many not fit, but used at home. 18s. per dozen was the largest sum received for Nectarines this season. There are Vines in this house, but kept exposed until the middle of April, the crop from these is very large. My gardener made £164 for his Grapes this season from one house 110 feet by 15; the roots were covered with glass also to the extent of 5 feet in addition to the 15. He began cutting in the middle of April, when he sold the Grapes for 12s. per lb.

I find the best remedy for aphides out of doors is 1 lb. of perfectly dry Scotch snuff and 3 lbs. of the white silicious dust which can now be obtained quite dry in any quantity in our lanes; being silicious, every particle can be syringed off. A puff-ball of indiarubber with a conical tube is the best thing for small growers to apply this with; a saucer being used for the powder, the ball when empty and compressed will suck up the powder. Yesterday, the 19th inst., the whole atmosphere in this neighbourhood was loaded all day with green fly.—AMATEUR.

LA CONSTANTE STRAWBERRY.

MAY I be allowed to recommend such of your readers as contemplate making new Strawberry-beds to try *La Constante*? I grow *Filbert Pine*, *British Queen*, *Crimson Queen*, *Carolina Superba*, and many others, but I do not think one of them is equal to this very fine variety. There is a peculiarly delicious aroma about it which no other Strawberry possesses; and it is a handsome-looking fruit and ripens thoroughly where *British Queen* will not.—P.

[We quite agree with our correspondent in his praise of this most excellent variety.]

GISHURST COMPOUND VERSUS AMERICAN BLIGHT.

WE have had a very bad year for the American blight on our Apple trees, so much so that we have been applying the Gishurst with the garden engine, and in doing so I noticed a fact that may interest you—viz., that all the trees that had been dressed with Gishurst in previous seasons were clean, or nearly so, while those that for ten years had never been blighted, nor dressed, were this year covered as with snow. The spread this season is beyond anything I have ever known; it is a hard matter to find a clean tree, but I am determined, if possible, to keep it down. My success with the Orange family has been complete. Three dressings in two weeks in the spring, with a solution not stronger than 2 ozs. to the gallon, will carry the trees through the summer clean. We do this when the fruit is gathered, and before the growth starts for the following season, and have no further trouble with them.—JOHN CARSON, Melbourne, Australia.

CULTIVATION OF THE MELON.

(Continued from page 43.)

SUCCESSION.—To have a regular supply of Melons, it is necessary to have a succession of beds. Subjoined is a table of the principal operations, and the times of their performance, on a number of beds and pits heated by dung alone, which furnished a regular supply of Melons of fine flavour from May to November. The time of setting was when the fruit began to swell freely.

No. 1.—Three-light Frame.									
Sort.	Sown.	Bed made.	Bed sowed.	Planted.	Earthed.	Fruit set.	Ripe.	No. cut.	No. of Plants.
Early Cantaloupe	February 5th.	March 3rd.	March 14th.	March 18th.	April 17th.	May 1st.	June 16th.	21	9
"	"	"	"	"	June 23rd.	July 26th.	September 8th.	16	—
No. 2.—Two-light Frame.									
Orion	February 5th.	March 3rd.	March 14th.	March 21st.	April 16th.	May 15th.	June 26th.	14	6
"	"	"	"	"	July 9th.	July 30th.	Sept. 18th.	15	—
No. 3.—Three-light Frame.									
Beechwood	March 7th.	April 1st.	April 12th.	April 16th.	May 10th.	June 1st.	July 26th.	35	9
"	"	"	"	"	August 1st.	August 12th.	Sept. 30th.	11	—
No. 4.—Two-light Frame.									
Scarlet Gem	March 18th.	April 3rd.	April 18th.	April 19th.	May 20th.	June 16th.	July 26th.	18	6
"	"	"	"	"	August 6th.	August 16th.	October 6th.	11	—
No. 5.—Two-light Frame.									
Cocoa Nut	April 17th.	April 29th.	May 5th.	May 8th.	May 18th.	July 1st.	August 23rd.	8	4
No. 6.—Two-light Frame.									
Golden Perfection	April 17th.	April 26th.	May 8th.	May 13th.	May 24th.	July 13th.	Sept. 17th.	7	4
No. 7.—Three-light Frame.									
Incomparable (Bou- sieu)	April 19th.	April 29th.	May 6th.	May 9th.	May 18th.	July 14th.	Sept. 11th.	29	9
No. 8.—Three-light Pit without means of lining.									
Egyptian	May 1st.	May 12th.	May 23th.	June 6th.	June 30th.	July 28th.	Sept. 21st.	20	9
No. 9.—Three-light Pit, with means of lining.									
Stoke Farm	May 12th.	June 3rd.	June 20th.	June 23rd.	July 1st.	August 6th.	October 4th.	27	9
No. 10.—Three-light Pit with flue in front.									
Cabel	May 13th.	June 5th.	June 20th.	June 27th.	July 14th.	August 18th.	October 12th.	16	9
Total								241	74

The above table refers to a place where the supply of fresh litter was equal to a cartload of dung per day, and the demands of the family great. For a moderate family three frames or pits are sufficient to afford a fair amount of fruit from June, or the beginning of July, until the middle of October.

The following table, gives the dates of the principal operations in three such pits, with the heat at 1 foot below the surface, also the day and night temperature at various stages:—

First crop, also furnishing a second crop.—Sorts: Onion, Scarlet Gem, and Early Cantaloupe.

	Sown.	Bed Made.	Bed Sowed.	Bed Planted.	Bed Earthed.	Fruit Set.	Fruit Ripe.
Date	Feb. 6.	Mar. 5.	Mar. 15.	Mar. 21.	April 9.	May 14.	July 10.
Soil heat	85°	...	91°	88°	86°	84°	81°
Day temp.	85°	...	84°	81°	81°	85°	85°
Night temp.	70°	...	...	73°	70°	65°	67°

Second bed or succession.—Sorts: Bromham Hall, Beechwood, Bousie's Incomparable.

	Mar. 2.	Mar. 27.	April 14.	April 21.	May 17.	June 20.	Aug. 15.
Date	Mar. 2.	Mar. 27.	April 14.	April 21.	May 17.	June 20.	Aug. 15.
Soil heat	87°	...	88°	84°	82°	85°	83°
Day temp.	85°	...	87°	85°	85°	82°	86°
Night temp.	68°	...	...	71°	67°	64°	71°

Last crop.—Sorts: Egyptian, Stoke Farm, Excelsior.

	April 6.	April 26.	April 30.	May 10.	June 7.	July 13.	Sep. 15.
Date	April 6.	April 26.	April 30.	May 10.	June 7.	July 13.	Sep. 15.
Soil heat	84°	...	97°	88°	84°	81°	76°
Day temp.	87°	...	...	86°	85°	85°	85°
Night temp.	70°	...	...	74°	67°	65°	63°

SUPPLY.—A range of pits of nine lights, divided into three compartments, each 11 feet by 6 feet, or separate frames, will furnish on an average fifty fruits of good size and flavour, some years more, others less. Two fruits are sufficient for a strong, healthy plant to bring to maturity; more are had at the expense of size and flavour. Where, however, two plants only are placed under one light, three fruits may be taken from one plant, and where a quantity of Melons are desired, size being no object, more may, of course, be left on a plant. In 1861, I cut thirty-seven fruit from nine plants in a three-light pit in July, and in September seventeen more, making a total of fifty-four, the fruit weighing col-

*After the fruit was cut the old Vines were pruned in, to near the root as the young shoots springing from the stem, or near it, determined. These shoots were encouraged when the fruit approached ripening, or became rotted. A portion of the old soil was removed, and its place supplied with fresh. Water was supplied copiously, and a fresh lining of hot dung applied, by these means a healthy action of the roots was encouraged, and the result was a crop of fruit little, if at all, inferior to the first.

lectively 41 lbs.; whilst from nine plants in an adjoining pit of like dimensions, seventeen fruits were cut, which weighed 33 lbs., or, on the average, double the weight of those produced by plants carrying a greater number of fruit.

Where the supply of fermenting material is only sufficient to make up a bed, it is useless to attempt to obtain a crop of Melons early, unless hot dung be in readiness to renew the heat by linings; then a crop may be relied on. With only sufficient dung to form a bed, it is best to defer making it up until the middle of May, so as to have it in proper order for the reception of the plants, which may be procured of some gentleman's gardener, or a few pots of the desired kinds might be accommodated in a neighbour's frame to forward, and have them ready to plant in the bed when it is ready to receive them; if not, a small frame must be placed on a hotbed, that the plants may be forwarded in it. If a Cucurbit frame at work be at command, no difficulty will be experienced in raising plants. A bed made up early in May, 3 feet or more in height, and a foot wider than the frame, will retain a moderate heat for about six weeks, by which time the heat of summer will be almost sufficient to carry on the plants without artificial heat; but if wet, dull weather set in, particularly at the time when the flowers are on the point of setting, the short grass coming from lawns after mowing, placed round the frame on the dung, will revive the heat, and materially aid the process of fecundation. In dull, cold seasons, it is next to impossible to get Melons to set their fruit where there is not material at hand for lining the bed; but in the majority of seasons fruit of moderate size and flavour may be had by aiding the plants at the beginning with a little warmth, and then husbanding the sun heat.

FERMENTING MATERIALS FOR HOTBED.—Where the inclination exists to have anything, means are easily provided, not that everything will do for supplying heat to Melons, but the most simple and common materials of a fermenting character may advantageously be employed. Tree leaves may be collected in the autumn when dry, and kept in any out-of-the-way place, piled up or closely packed together so as to represent a stack, with a ridge roof thatched with coarse grass, reeds, or straw, which will throw off much of the wet, and keep the leaves nearly in the same condition as when stacked, until spring. Then by employing a little fresh litter to render the sides of the bed firmer, moistening the leaves with water, a good bed 5 feet high in April, 4 feet in May, may be formed, and it will be less violent in heating than stable-dung, but more lasting. With a supply of leaves, and the mowings of lawns, the heat may be maintained by

lining the bed as the declining temperature indicates that a renewal is necessary. Oak and Beech leaves are the best for this purpose.

There are, besides, many vegetable substances, such as nettles, thistles, and other refuse growing by hedges, which with the remains of the flower garden, as Hollyhock stalks, Pea haulm, and a host of other things, cut into six-inch lengths, dried in the autumn, and kept over winter in any dry place, form excellent substitutes for stable litter in spring. The above and many other fermenting materials thoroughly moistened by sprinkling either with water or liquid manure, and formed into a bed 4 feet high, will raise a gentle heat, especially if some green vegetable matter, such as nettles, short grass from lawns, and weeds of all kinds, be mixed in to hasten fermentation. With a plentiful supply of such materials, which can be had in any country place for the trouble of collecting, there is no difficulty in growing Melons of good size and flavour. Any deficiency in the heat of the bed afterwards can be rectified by collecting a further supply of materials in a green state; but for maintaining the heat nothing is better than the short grass furnished by the mowing of lawns.

Other substitutes for stable litter are found in cotton waste, the refuse of wool commonly called willey-dust, flax refuse, and spent hops. All these are first-class materials for furnishing bottom heat and maintaining a suitable temperature for the growth of the Melon. A bed 2 feet in thickness of cotton and wool waste or of hops, and 3 feet of flax refuse, is equal in heating properties to a bed of dung 4 feet thick. They require to be moistened with water, but not so much as dung. If made very wet the cotton and wool waste will not heat at all, or, if they do, the heat will be violent and soon over: just moistened is the proper condition. Hops need no watering; flax refuse about the same as stable litter, but if anything rather less. All, after having been employed for growing Melons, are excellent manures.

ECONOMISING HEAT.—If the means at command are limited to the making-up of a bed; or if the Melons are grown in pits without linings, it becomes imperative to collect as much of the sun's heat as possible. This is effected by giving what air is necessary to cause a change of atmosphere early in the day; when the thermometer reaches 80°, which it will do in May and later in the season by 8 or 9 a.m., open the lights by tilting them at the back. Giving air by pushing down the lights only causes a current of cold air to rush in at the bottom of the frame and out at the back, which is injurious. Air being admitted early, it should be shut out early. Presuming that there is no heat in the bed calculated to raise the temperature more than 5° or none at all, the frame or lights may be shut up by 2 p.m. in May, 3 p.m. in June and July, 2 p.m. in August, and 1 p.m. in September. Any watering that may be required should be done before the frame is closed, a gentle bedewing overhead at the time of shutting up being of great benefit to the plants, and a great annoyance to the red spider. Though these hours of shutting up will prove generally applicable, yet, as all days are not equally sunny, a good deal must be left to discretion. If, after closing, the sun's rays do not raise the temperature above 90° or 95°, no harm will ensue; but if the heat rise above 90° it must be reduced by admitting a little air. The frame may at any time be shut up with a temperature of 90° if there is no likelihood of great sun heat afterwards, but always before the temperature of the frame falls below 80°; and if the sun raise the thermometer 10° after shutting up so much the better. The heat shut in or collected afterwards will be better than a high artificial heat.

Melons grown in the above manner will not require so much water as those in frames with a strong bottom heat—in fact, none should be given them beyond enough to keep the soil moist whilst the fruit is swelling, and this may be done by a good watering once a week, which, in addition to sprinklings overhead at shutting-up time, will be all that is required. Sprinklings will not be required in dull cold days; and when the blossoms are setting no water should be given either overhead or to the soil, nor after the fruit has attained its full size and commenced the ripening process, which is when it becomes fully netted. The fruit after setting is longer in arriving at maturity in this way than when a

higher and more regular temperature is maintained. It usually takes from fifty-five to sixty-five days to bring Melons to maturity in cold frames.

SECOND CROP FROM THE SAME PLANTS.—Plants fruiting in June and July may be made to furnish a second crop; but it is well to prepare them for this as soon as the fruit has attained its full size by encouraging five or six of the strongest vines starting from or near the necks of the plants, stopping at the first leaf those that appear above them, or cutting them clean out if the large leaves are healthy on the vine or shoots producing fruit. Other shoots not producing fruit should be cut out, so that the strength of the plant may be concentrated in the shoots selected for furnishing a second crop. No water need be given, for the young shoots will take that which would be expended in useless growths, and will feed on the matter stored up in the large fleshy roots, and so grow luxuriantly without the aid of water for a period of a fortnight or more. If the plants have not vitality to push strong shoots a foot long between the time of the fruit becoming fully netted and that of its ripening, they are of no value for a second crop, and had better be pulled up, the bed and soil renewed, and young plants put in their place. Young plants will furnish larger crops and finer fruit, but about six weeks later than old plants from which a crop of fruit has been taken.

When the fruit on the old plants is ripe cut away the old shoots, renew the lining of the bed, taking away as much of the old linings as can be conveniently done, and remove the surface soil of the bed with the hand to the depth of 2 or 3 inches, more or less as the situation of the principal roots may determine. A little of the old soil may be removed between the large roots, always bearing in mind that the less the fibres are disturbed and the large roots injured, the more certain are we of active root-action. After removing the old soil water each light with water at a temperature of 90°, and then cover the surface with 3 inches of fresh compost, pressing it firmly around the roots. In doing this care should be taken not to remove any soil within a radius of 1 foot from the neck of the plant. When this operation is completed give a gentle watering with tepid water, and keep close and shaded by covering the plants until they become re-established, after which they require the same treatment as young plants.

SHADING.—Melons do not require shading at any stage of their growth if they are properly insured to light from their first appearance from the seed. It always struck me as strange how any one could imagine a plant so capable of bearing so much heat and dryness as this could require shade from the sun, and that in a climate where the sun's rays are much less powerful than in its native home. I have never found it necessary to shade Melons, except a little after planting-out in bright weather to further their taking hold of the soil; and after a continuance of dull weather, when the plants sometimes flag, a slight shading is necessary. Beyond this I do not consider shade favourable to the production of fine full-flavoured Melons. Though shade may increase the size of the fruit, I am certain that any fruit formed whilst the leaves are not duly exposed to all the light is never so full-flavoured as that formed when they are so exposed.—G. ABBOT.

(To be continued.)

AN AMATEUR'S PENCILINGS.

THE BROMELIACEÆ.

SURELY the attractions of this tribe of plants are much less known than they deserve to be, or else they would be seen more frequently, and in much greater numbers, in the stoves and conservatories of our plant-growers, ever on the look-out for the novel and the beautiful. I will, *meo more*, tell you the story of one which has just delighted me and my household, and has won golden opinions from wondering and admiring friends. Years ago, in the forests of tropical and sub-tropical America, the strange and often gorgeous parasites of this order forced themselves on my notice and strongly attracted me; and to this day the Wild-pines,* as they are called by the colonists, form one of the most promi-

* Pronounced as one word, with the accent on "WHĀ."

most features of the vivid pictures which memory calls up of the forest scenes in lovely Jamaica.

The little negro villages in that island, groups of huts which shrink with an old instinct from the white man's gaze into the secluded glades and unsuspected nooks of the forest, are surrounded by inviolable *chevaux de frise* of Pinguins (*Bromelia pinguin*), a large-growing species of the tribe. This prickly bush, at first planted in line as a fence, rapidly spreads, and covers a broad area when neglected and allowed to follow its own will, as it usually is, at least on the exterior; a result perhaps not unwelcome, as it makes approach to the sable homesteads more difficult. The fence is absolutely impenetrable by man or beast; nothing less than an elephant or a rhinoceros would face it. When not in flower or fruit you would scarcely distinguish it from the cultivated Pine Apple, another species of the same genus; but it is more vigorous and formidable, the long channelled leaves which arch out on every side from the centre being beset along their edges with strong recurved spines, exceedingly sharp, and capable of inflicting terrible wounds. In March the Pinguin blossoms, and then it is a beautiful object, the central leaves becoming of the most brilliant glossy vermilion, and the thick erect spike of bloom of a delicate pink white. This is replaced by a dense head of hard woody capsules, not united into a succulent fruit as in the Pine Apple, but separate, though closely packed. They contain an intensely acid juice, which is pleasant to moisten the lips or tongue, but is found to be acrid and caustic if used too freely.

On the rocky sides of gloomy gorges cut through the ranges of limestone mountains, where a narrow and precarious footpath often borders a rushing torrent, we see springing out of the clefts tufts of different species of the genus *Pitcairnia*, for the most part resembling tussocks of coarse grass, whose spiny blades arch and droop in elegant curves; while, if the season be spring, the centre of the crown is adorned with spikes of long tubular blossoms, scarlet, or pink, or white, according to the kind.

Much more striking, however, are those genera which are parasitic on trees, and these are eminently characteristic of the scenery in the warmer regions of the western hemisphere. They are found in all situations—on the tops of the mountains, in the low sunburnt plains, by the shore of the glittering sea, in the depths of the gloomy forest, in the open savannah—wherever a tree will grow, there also is a place for its *fidus Achates*, the epiphyte Wild-pine. They affect all sorts of trees, scarcely a tree being without one or more, large ones often carrying hundreds; nor do they seem to attach themselves to dying or diseased trees more than to such as are in perfect health. One species, called Old-man's Beard (*Tillandsia usneoides*), is very abundant. In the great swamps of the southern Confederate States the sombre evergreens, that almost shut out the light of day, have their gaunt limbs densely clothed with ragged pendent festoons of this grey parasite. It is small and slender individually, but forms immense matted bunches, with wiry flexible stems of indefinite length, intertwined and tangled together. These are of a pale yellowish green hue, especially near the tips, where the young leaves appear, most of the plant being covered with a hoary greyish sort of down. The leaves sheath the stem, and each other, at their bases, and project so little as scarcely to affect the general filiform appearance. So readily is it propagated, that a bunch torn off and flung into the fork of a tree will immediately take root and spread rapidly. The fibres, divested of their outside coat, make excellent mattresses, and are a good substitute for horsehair, from which it is scarcely possible to distinguish them by the naked eye. I have found it a capital material to stuff bird skins.

Other kinds, however, are far more attractive than this. There is one, *Tillandsia bulbosa*, which seems to be spread all over tropical America. It has a globose base, much like the bulb of a Lily, and narrow, almost cylindrical, pointed leaves, of which those near the blossom are of a fine crimson hue. A spike of flowers, lengthened in form, and of crimson and purple hues, with singular sheathing bracts, and projecting purple stamens, makes this a beautiful plant in the blooming season. Like the rest of this genus, it is a difficult plant to reconcile to artificial habits. The *Tillandsiæ* are the most stubborn of the order. We import them, possibly

flower them one season, and then they die, without propagating their lovely but churlish forms. I have one or two specimens of this kind, which I imported from the mouth of the Amazon two years ago. I have planted them on the top of a brick pier in an Orchid-house, where they continue, looking healthy enough, but making no growth, and sending out no offsets. Fortunately the majority of the tribe are more persuasible than this, or I should not be singing their praise in a horticultural journal.

Different species of *Vriesia* and of *Echmea* are found abundantly in the mountain woods of Jamaica; the former throwing out long, simple, or branching spikes of crimson and yellow flowers, imbricated or sheathed in a singularly compact manner; the latter gorgeous in scarlet and purple. But the most imposing of all that I have seen there is the noble *Billbergia lingulata*; the leaves are long and shaped like those of the Pine Apple, but widened, and, as usual in the order, sheathing each other at their bases; and in July they protrude a spike of large flowers of the richest crimson hue and of a polished surface. The sheathing bases of the coriaceous leaves of most of the epiphyte species form natural reservoirs for water: the rains and dews accumulate here in considerable quantity, and form a resource for thousands of birds, and even for man himself, in the season of drought; while the capacious reservoirs afford retreats, always cool and moist, for such reptiles as respire through their skin. The various species of tree-toads, often of large size and fantastically brilliant colours, habitually dwell in them, and sitting in their comfortable baths give utterance to such deep snores, such gurgling throttling groans, and such shrill piercing shrieks, as startle the benighted traveller in the solemn forest with sudden thoughts of murder and mortal agony.

Such were my associations with the Bromeliaceæ when in the spring of 1862 I began to grow them. I had just erected a small house for the cultivation of a group in some respects, as to habitat, habit, and singular gorgeousness of beauty, kindred in character—viz., the Orchideæ; and I felt a strong desire to renew acquaintance with my old friends the Wild-pines.

In Carter's catalogue of seeds for the season, I had noticed *Billbergia zebrina*, which I knew to be a fine Brazilian species; and, though I was not very sanguine of success in raising Bromeliaceæ from seed, I sent for a packet, and sowed it at once. This was the 8th of March, and on the 25th the tiny plants, like little points of grass, were peeping. They grew on, the sheathing character of the leaves manifest from the first, and soon they required to be pricked-out. As we commonly find with seedlings that some much exceed their fellows of the same batch in size and vigour, so here one *Billbergia* soon outstripped all its compeers, and grew apace. I shifted it as it needed, draining the pots well, and giving a greater proportion of loam as it increased in size. From November to March it was allowed to rest, and scarcely received any water. By the time it was two years old, that is to say, in the present spring, it had attained noble proportions. It was now in an eight-inch pot, the main crown about 2 feet high, but the longest leaves were full 3 feet measured along the curve, and 3 inches in diameter. For more than half their length they take a semi-cylindrical form, sheathing each other below, and thus giving to the body of the plant the appearance of a deep but narrow vase. Water always stands in this cup, and in the hollow bases of the individual leaves. These organs are spinous at the edge, but not strongly so; their colour is a glaucous or greyish green, as if slightly mealy, and on their exterior they are marked at irregular intervals with undefined transverse bands of white, whence the name of *zebrina*. Three vigorous offsets sprang out from the base, augmenting the stateliness of the plant, like three princely daughters supporting their queenly mother.

We had been looking for the flower-spike to appear, and had from time to time peered curiously into the dark depths of the vase-like hollow, but without success, till suddenly on the 10th of June, a thick cone came up from the interior, and showed its apex above the united leaves. It now lengthened with wonderful rapidity, pushing up in the form of a great pointed oval of 7 or 8 inches in length, and all over of the richest and purest rose colour. When this was pretty well visible above the tube, standing erect, it suddenly began to lean from the perpendicular and on being

touched was so unstable that I feared it had been broken at the base by some accident. However, it continued to lengthen with increasing rapidity, and also to fall over, until it hung down with a sharp curve. At the same time the tips of the green flowers began to protrude from the summit of the great rosy egg, and soon the ample convex bracts, of elegant shape, and spotless purity of colour, opened, and the massive thyrse of many blossoms was revealed. These I can compare to nothing so well as a cluster of short reeds, each about 3 inches long, pointed, polished, green, with its base enlarged, in form of a sculptured knob, which was encased in an envelope of pure opaque white.

As the thyrse continued to grow, the lengthening axis became distinct, stout, cylindrical, and of the same snow-white hue. The lower flowers now began to open, each in its turn; and a new peculiarity entertained us, for what had hitherto seemed the undivided green skin of the short "reed," split into three strap-shaped divisions, which then quickly rolled themselves up scroll-fashion, as you might roll up a narrow strip of paper, and finally projected in three bundles just above the white envelope of the basal knob. Thus it was manifest that these three light green straps, which as they rolled up reflected a satiny lustre, were the petals of the corolla, and the white envelope, which terminated in three points, was the calyx surrounding the knob-like germen. The rolling back of the petals exposed the stamens, which clung together as a long straight fascis, of a greyish green hue, each terminated by its anther in the same line, and the pistil projecting from the midst. It was interesting to note how the anthers instantly began to open as soon as they were exposed, and to display the black pollen of their interior.

Observations of these phenomena beguiled my wife and myself of an hour's sleep. I had removed the plant, on the protrusion of the thyrse, from the hothouse into the drawing-room, where it attracted no small attention. When night came, and we were about to turn down the lamp, we noticed that the petals of one flower were just separating at their tips, and saw one start up, and roll itself over in the first coil of its curious scroll. This one, then, we sat down to watch, and for a full hour our eyes were steadily fixed on the flowers, as one petal after another rolled back. Our impatience induced us to assist nature, by just lifting with a pin's point now and then, when the adhesion of the petals' suture was more than usually strong, or the coiling more than ordinarily tedious. The process occupied about an hour to complete it, and was visible only by our setting the position of the coil against some immovable part, and looking at it again in a few minutes; it was rather less than that of the minute-hand of a watch. About three complete turns perfected the scroll.—P. H. Gosse, *Torquay*.

THE ROYAL HORTICULTURAL SOCIETY.

On Tuesday last a lecture on the Rose was delivered at the Garden of the Royal Horticultural Society, at South Kensington, by the Rev. W. F. Radclyffe, of Rushton, Dorsetshire. One would have expected, from the popularity of the lecturer, and the universal interest with which his subject is regarded, that there would have been a large attendance on the occasion. We regret, however, to state that, with the exception of a few familiar faces, the audience was one which would have discouraged even the most indifferent; and we are much mistaken if the Rector of Rushton puts himself to the trouble and expense again of travelling nearly a hundred miles to oblige the Royal Horticultural Society, after such treatment as he received on this occasion.

As is usual in all cases where the legitimate objects of the Society are concerned, there was no trouble taken to give publicity to this meeting. Had it been an entertainment of the Mumbo Jumbo class, or an evening meeting to burn gas and blue lights, the announcements would have met you at every corner; but as it was only a gathering of horticulturalists, they could tell each other, and that would suffice.

But what if the lecturer himself was not told? We have the best authority for stating that, from the time Mr. Radclyffe consented to deliver this lecture, he was not officially, by the Secretary, nor by any other person, informed of the

time when it was to take place; and it was not till the evening before the lecture was to be delivered that he was informed, by electric telegraph, that his presence was required. Can it be wondered at that the affairs of the Society should be so muddled when they are entrusted to the management of people so utterly incompetent to fill the offices they so doggedly, yet so inefficiently, hold? When the Assistant Secretary goes wool-gathering he should leave the message-boy or some other competent person in charge.

Notwithstanding the small attendance, the audience consisted of those fully able to appreciate the subject. Sir Daniel Cooper, Bart., occupied the chair; and the only other member of Council present was the Rev. Joshua Dix. Among the audience we observed Drs. Lindley and Hogg, Messrs. Thomas Moore, R. Fortune, William Paul, George F. Wilson, W. Beattie Booth, Charles Turner, &c., &c. After some preliminary business, Mr. Radclyffe proceeded:—

"I thank the Council of the Royal Horticultural Society for the high compliment which they paid to me in asking me to give a short, popular, and useful lecture on matters connected with the Rose. As the time is limited, and as 'a great book is a great evil,' I can only select. I will endeavour to avoid prolixity, laxity, and obscurity. Nothing new can I say—nothing that has not been said before, and said much better. The best lectures on the Rose are the noble works of Rivers, W. Paul, and Cranston—works that should be in the library of every rosarian. Good, however, and truthful as these works are, I am persuaded that nothing but experience can make a man a first-rate rosarian. I will endeavour to speak from experience, making this observation, that all, or almost all, I shall say, has been given already to the public in my published articles from time to time.

"1. *Soil*.—The best soil for Roses, and for such stocks as I possess, is friable loam. Where this soil exists not naturally, it may be approached by an admixture of stiff soil, sand or ashes, and black manure, in equal parts. Oak trees, Roses, and Strawberries have all an affinity for clay. I had nearly said they are convertible terms. Still, even where there is not a particle of clay, which is the case where I live, certain Roses, on suitable stocks, with good high cultivation and attention, may be grown, and very fine Roses too. There are also Roses that cannot be grown without an admixture of clay. I need hardly say these are Roses which, though good in themselves, are not fit for the public generally.

"2. *Planting*.—Much depends upon how this is done. Briar Roses should not be planted deeper than 4 inches; indeed, if people would mulch the plants in a radius of 18 inches, they may be planted nearer the surface. Manetti Roses should be planted over the collar of the bud; and hence they should be propagated sufficiently low that the sources of the roots are not deeper than 6 inches.

"3. *Staking and Tying*.—All freshly-planted Roses, especially if exposed to wind, require to be staked and tied. Iron stakes are the best; but I use, for small plants, thatchers' spars 6s. 6d. per 1000; and, for strong plants, I use hurdle shores, at 7s. per 100. For tying I use matting. Where winds do not prevail, after the first year ground plants and two-foot standards (the most convenient height where numbers are to be packed in) will not require staking and tying. If ground plants are grafted they must always be staked and tied, or the weight of flowers will break them off at the point of union.

"4. *Rose Stocks*.—The Dog Briar, the Manetti stock, and the Celine stock, are all good stocks for certain Roses under certain circumstances. Roses are volatile things, and all rules admit of exceptions: in the rosery there is not, as in our courts of law, 'rule absolute.' As regards the Celine stock, I know but little of it. Mr. Wood, of Maresfield, kindly gave me four specimens of the Duchess of Norfolk on this stock, ranging with shoots of one year's growth, from 12 feet to 12 feet 9 inches high. They bloomed admirably last year at their full height. This year I shortened to 9 feet, and they have again bloomed well. I budded last year the Duc de Rohan, a splendid vermilion Rose, on the Boursault Amadis, and it has thrown up a fine truss and bloomed well. As regards the Briar stock, it is an admirable stock for strong lands, and better than the Manetti stock for dwarf and moderate growers; but, if land is light or shallow, unless you can afford to replenish constantly, and

also to mulch, you had better have Roses on the Manetti stock. This stock is suited to strong growers, and to all lands. Though an Italian stock, it is, on well-drained grounds, the hardest of all. In such inferior lands as mine, Roses budded in lace on the Briar, and manured very highly, bear no comparison with purchased Manetti Roses for earliness, abundance, and largeness of flowers, and for lateness and continuity of flowers: still, put Briar Roses in suitable land and it will do splendidly for you. For pole purposes the Manetti stock is, I think, the best.

"5. *Pruning*.—Some people prune on a particular day, and prune all Roses alike. Excellent rules are given for the pruning of all families in the three noble works before referred to. It must not, however, be forgotten that Roses in the same family require very different pruning. Among the Bourbons there is a world-wide difference between *Acadie* and *La Quintinie*. As regards a Briar Rose, in the spring of its first planting, or whenever it is moved, it is a rule that it must be cut hard, whether it be for a pole, wall, or standard. For lack of this Briar Roses frequently fail. Till, however, the sap rises, and the eyes swell, you must never prune. As regards Manetti Roses, they often fail from being cut hard. From first to last prune them as Hybrid Chinas, whether pot plants or monstrous plants. If their wood and skin are injured, then you must cut them down to sound wood and sound skin.

"6. *Growth and Hardiness*.—These do not always go together, but both are requisite for England. Some that have China blood in them grow well, but yet they are not hardy. As a rule the thorned Roses are harder than the smooth-skinned Roses. Of course there are exceptions in both cases. When, therefore, you see a novelty described as thornless, remember it may be no recommendation. I ventured, some years ago, to say, in an article, that none but vigorous growers would suit the English; and the consequence has been, that raisers of seedlings have erased the words 'dwarf' and 'moderate,' and now almost every new Rose is described as 'vig.' I am told that some of the new Roses of 1864 described as 'vig.' are very dwarf and bad growers. 'Moderate,' in the fine lands of nurserymen, will be 'dwarf' in ninety-five lands out of a hundred, and 'dwarf' means death. The two best moderate growers, and both hardy and excellent, are the well known Giant of Battles and *Pauline Langezeur*.

"7. *Watering*.—Roses suffer much in torrid weather from lack of water. Before watering the ground should be surface-stirred, and sufficient water poured over the roots to touch all the points of the roots. If the surface is kept superficially stirred, it will be moister than when kept corked down tight, because a lesser quantity of rain, and the night dews, which are in the ratio of the sun's heat, will be able more easily to penetrate the soil.

"8. *Syringing*.—A great many of the miseries of Roses would be got rid of if the trees were regularly syringed from the earliest appearance of the leaves. By keeping the lungs clean you preserve the health of the plants. The leaves of plants are *externally* and *internally* conducive to health. Syringing is the best thing to keep down fungi and aphides, and also to prevent the mischief of honeydew, which, if not washed off as soon as perceived, will, by the sun's extraction of the fluid parts, leave a viscous concrete, that will destroy the functions of the leaves.

"9. *Fungi*.—These are a numerous family. The two most destructive are orange fungus and white fungus. Orange fungus must be picked off by hand before the nucleus bursts and spreads its spores over the leaves; and white fungus must be destroyed by sulphur (the black sulphur is best), or by 2 ozs. of blue vitriol, dissolved in a little hot water, and then mixed with a stable-bucket of cold water, and poured from a watering-pot, with the top on, over the leaves. This is the most effectual remedy. There is another misery, 'black blight.' This is also called by some a fungus. It may be so; but I could never perceive the spores of fungus. It proceeds, I believe, from a low state of temperature, also from checks of weather. I am inclined to think this, because I never remember seeing it under glass, which is no preventive of white fungus. It is less mischievous than either of the other two miseries. When it occurs early in the year, if the leaves are universally affected, stirring the ground deeply, or removing the plant,

to estop the sap, are probably the best preventives of mischief.

"10. *Wind*.—Roses cannot have too much air, and too little wind, in the growing season. At other times it is beneficial. Great havoc every year has been committed on my rosery by the destruction of the leaves by wind. This season the wind has been quiet; but in ten of the months last year there were from one to five gales monthly.

"11. *Novelties*.—Do not give up such good and hardy Roses as the Giant of Battles and *Baronne Prevost*. They have outlived hundreds at my residence, and are as healthy as they were twelve years ago.

'Tis good to be on with the new love
Before you are off with the old.'

No question, good Roses come out yearly; but we want not only good Roses, but better than we have got: we want more distinct Roses. As regards form, we need more cups and globes; as regards colours, we want true purples (now supplied by *Alfred de Rougemont*), full-sized autumnal pure whites and creamy whites, yellow Hybrid Perpetuals, variegated Perpetuals, high-coloured Teas, and more full-sized, full, very dark Roses. In the dark line we have *Empereur de Maroc*, small, but beautiful and full; *Princesse Mathilde*, dark, shelly, beautiful, but not full; *François Arago*, full and good; *Duc de Cazes*, dark, full, and fine; and *Alfred de Rougemont* and *Prince Camille de Rohan*, both very dark, full, and fine. There is one new Rose very interesting, tolerably dark, and also good—a Rose of royal and national interest—*Deuil de Prince Albert*, or the Mourning of Prince Albert. Mr. Rivers has well said, in a letter to me, that it is, from its darkness and mournfully-pendulous habit, well adapted to represent the royal and national, and, I may almost say, world-wide sorrow at so sad an event. I caused it to be mentioned to Her Majesty by my friend Lord Rivers; and I cannot but think that this Rose, and such-like as I have named, would be very appropriate to adorn the mausoleum, and also suitable to this Royal Garden, so indebted to Her Majesty and the late Prince Consort.

"Lastly: *The Selection of Roses*.—I think you cannot do better, if you do not know the Roses, than state to the nurserymen what are your circumstances and wants, and, though they cannot for several years be quite sure about novelties, I am sure they will not wilfully deceive you. The old 'stuff' they well know; but they cannot, in the case of novelties be sure of them till they have passed through severe winters and unpropitious summers, or tell their true value or worthlessness. I think the nurserymen should take some security from the raisers of seedlings that the Roses are according to description; and I also think that they should make inquiry as to the '*suppressio veri*,' as well as take security against the '*expressio falsi*.'

"It now only remains to thank you for your kindness, and to hope that what I have said may create true rosarians. Your well-known love of the Rose must be my apology for this prolonged address. I hope that I shall not commit a breach of good taste if I express my thanks to Her Majesty for originating this great Society; if I thank the Society, on behalf of all rosarians, for their splendid patronage of the Rose cause; if I express my far greater gratitude to Him from whom, and through whom, all blessings flow, who is the 'Rose of Sharon and the Lily of the Valley.'"

FLORAL COMMITTEE.—A meeting of the Committee was held on the 19th inst., but no plant or flower of any particular interest was exhibited, the subjects for examination being unusually few for the time of year.

Mr. William Paul sent two seedling Hybrid Perpetual Roses—namely, Dr. Lindley, dark rosy crimson, fine full flower, of promising qualities, but not in condition; and *Rosea elegans*, a bright light rose, but deficient in substance and quantity of petals. A second-class certificate was awarded to the first named. From Messrs. Carter and Co. came a hybrid tree Carnation, called *Goliath*, indistinct in colour, highly scented, but by no means an ornamental flower. Mr. Bull, Chelsea, sent *Cypripedium superbians*, not sufficiently distinct from other well-known varieties; *Achimenes Leonie*; *Tropaeolum Gold Belt*, yellow flower with deep orange spots on each petal; and *Weigela alba lutescens grandiflora*. From Mr. Perry, Castle Bromwich, came cut flowers of six seedling Verbenas, of which *Snowball* had an

average truss, and most beautifully-formed flowers, nearly circular and flat, the eye rather too green, and the white ground slightly tinged with pink, decidedly the best formed white we have. This received a second-class certificate. Glowworm, dark red, with a large conspicuous eye, if of good habit, will make a very effective bedding plant. The others were Delicata, bright rose; King of Lilacs; George Tye, pale violet, with large white eye; Queen of Pinks, a rosy carmine—all of them very nice flowers, but not distinct in colour from others. Mr. Perry also sent a stand of twenty-four Verbenas in first-rate condition. Among the sorts especially good were Black Prince, Firefly, Foxhunter, L'Avenir de Ballent, Cato, and some good unnamed seedlings. A special certificate was awarded for this beautiful collection.

Mr. Holland, Isleworth, sent *Asplenium trichomanes subequale*, a plant of peculiar flat growth, the fronds lying on the surface of the pot, a distinct variety, for which a second-class certificate was awarded; also, *Cyclamen Peakianum*, which had been exhibited before. Its propensity to continue flowering seems to be its great recommendation. In colour and form it is not equal to others. Mr. Holland had a first-class certificate for *Petunia Striata perfecta*, circular form, pale rose, striped with white bars, very constant in its colour and markings, a very free bloomer, and of good habit, likely to be very useful. Messrs. Downie, Laird, and Laing contributed *Pelargonium Golden Sceptre*, of the Mrs. Milford character. Such seedlings are innumerable, and not easily to be distinguished. Messrs. Paul & Son, Chesham, exhibited English seedling Hybrid Perpetual Roses, Lord Canning and Lord Clyde, the former a bright globular rosy carmine flower, but wanting in substance of petal, and too thin. It was requested that this might be seen again. The specimens of Lord Clyde were beautiful; it is the most brilliant in colour of its class; their seedling Rose, Hamlet, was also shown by Messrs. Paul. Mr. Windsor, gardener to Lord Dufferin, Highgate, sent four seedling Scarlet *Pelargoniums*, Blair Athol, Gem, Grandis, and Highgate Rival. The last, which received a second-class certificate, was a very good flower, a bright shaded orange salmon, with broad flat petals, very free flowering, and forming a fine truss. Mr. Young, gardener to R. Barclay, Esq., sent four seedling *Gloxinias*.

It would materially assist the Committee in deciding on the merits of seedling Verbenas, if the exhibitors would state whether the flowers sent for examination were grown under glass or in the open air. It must be evident to every cultivator of this beautiful flower, that the value of a *Verbena*, both as respects colour and habit, depends much on its being able to resist the influence of the sun's rays, and the effects of rain.

FRUIT COMMITTEE.—A meeting of the Fruit Committee was held at Chiswick on Thursday last; Mr. Edmonds in the chair.

A requisition was some time ago presented to the Council by the Committee, requesting that the meetings, which have been discontinued since January last, should be resumed, and that Dr. Hogg should be asked to accept the office of Honorary Secretary to the Committee; in accordance with the arrangement made between the Council and Dr. Hogg this was the first occasion on which a meeting had been held this season.

The Committee first proceeded to the examination of a collection of twenty-four varieties of Red Currants, many of which were found to be synonymous with others, and many to possess no particular merit. Red Cherry and Fertile were synonymous; Pitmaston Sweet Red, Late Red, and New Sweet Red were the same as Victoria; New Red Dutch the same as Red Grape. In the opinion of the Committee the best variety for flavour was Red Cherry, and the second best for flavour and cropping the Red Grape. The Red Grape is by many considered the same as Red Dutch; but, while it is as great a bearer, and produces as large bunches and berries, it is distinguished from it by the long, slender, yellow footstalk of the bunch, and the pale red colour of the berries; the colour of the Red Dutch being a dark ruby.

The Committee then examined the collection of prize Gooseberries, or, as they are improperly called, Lancashire Gooseberries, of which there are 176 varieties in the garden. A large proportion of these are perfectly worthless as regards

flavour, and have only their size to recommend them; but there are also some that even as dessert fruit possess high qualifications: we shall, therefore, give a selection of those in each class that deserve to be cultivated for their flavour.

REDS.—*Companion*, a bright rough red, with rich flavour; very excellent. *Speedwell*, rough light red, thin-skinned, with a fine grape flavour. *Ricardo*, bright rough red, coarse flesh, but good flavour.

YELLOWS.—*Broom Girl*, rough, and thin-skinned, tender flesh; very fine flavour. *Fanny*, rough thin skin; very rich and excellent. *Perfection*, thin-skinned, tender flesh, and with a fine melon flavour. *Two-to-One*, thin-skinned, tender flesh; good. *Goldfinder*, a large, long, rough yellow; very richly flavoured. *Leader*, a smooth dark yellow, large, thin-skinned, tender-fleshed, and with a very rich flavour. *Moreton Hero*, smooth light yellow, thin-skinned, and very richly flavoured. *Legerdemain*, very large and long, smooth and thin-skinned, tender flesh; good flavour. *Candidate*, long, smooth, thin-skinned; very tender and rich. *Tiger*, long, smooth, thick-skinned, coarse flesh, but good flavour. *Gipsy Queen*, thin skin, delicate flesh, and richly flavoured.

GREENS.—*Model*, rough thin skin; richly flavoured. *Green Prince*, thick skin, coarse flesh, but good flavour. *Gretna Green*, rough thin skin; good brisk flavour. *Tantivy*, smooth thick skin, coarse flesh, and good flavour. *Slaves*, smooth thin skin, very tender flesh; good flavour. *Beaton Castle*, smooth thin skin, tender flesh, very fine and rich. *Lord Eldon*, smooth thin skin, tender flesh, sweet, and very rich. *Sir Charles Napier*, smooth thin skin, tender flesh; good flavour. *Telegraph*, immense bearer; smooth thick skin, coarse flesh, but good flavour. *Arthur*, smooth thin skin, tender flesh, good flavour. *General Markham*, skin smooth, thin; flesh tender and nicely flavoured. *Safety*, long and smooth; skin thin, flesh tender and of good flavour. *Freedom Green*, immense bearer; very large long fruit, thin skin, tender flesh; excellent flavour. *Green Overall*, smooth downy thin skin, tender and melting flesh, and delicious flavour. *Lofly*, very thin hairy skin, tender flesh; very rich and delicious. *Keepsake*, fine large hairy fruit, thin skin, and deliciously flavoured. *Green River*, smooth, thin skin, tender flesh, and good flavour.

WHITES.—*Lady Leicester*, oval, rough, thin skin, tender flesh; sweet and good. *Snowdrift*, round, hairy, hard flesh, but good flavour. *King of Trumps*, oval, smooth, rather firm flesh; excellent flavour. *Moreton Lass*, round, slightly downy, thin skin, tender flesh; good flavour. *Snowball*, roundish, downy; fine flavour. *Tally-ho*, large and long, hairy, thin skin; very fine flavour. *Jenny Jones*, smooth thin skin, tender flesh; melting and richly-flavoured. *Flora*, smooth thick skin; good flavoured. *Eagle*, smooth thick skin; fine flavour. *Mayor of Oldham*, smooth, very thin skin and tender flesh; exquisite flavour. *Patience*, smooth, tender skin and flesh; very fine flavour.

CHANGING OCCUPATIONS.

You have given at page 49 good practical advice in reply to a Yorkshire village tailor, and it has struck me that "a fellow feeling should make us wondrous kind," and induce us to point out a few footprints on the rough sands of time, by way of encouraging the heart of a forlorn brother.

To the Yorkshire village tailor, then, I say, Make up your mind to be a gardener—first, because you seem to have a natural love for the occupation; and, second, because you wish to regain health and strength. If you have the means of starting a little business in seeds and plants, or a little market gardening business, the road to success is sure enough, since you have the will. If you cannot hoist your standard quite so high, get a few rods of land in the parish allotments, and devote a few hours a-day to its cultivation. This, with the aid of THE JOURNAL OF HORTICULTURE, will soon enable you to know more about gardens and gardening; and, should your health get established, perseverance will soon work out a wished-for success.

One of the most successful florists of the day was a journeyman shoemaker when I was a boy. He began by growing a few plants, and sending them for sale on a pair of trucks to a neighbouring town once or twice a-week.

The writer of this in the year 1840 was a very small boy in a country printing office nearly 100 miles from London. In

1851 he was a clerk in a large print warehouse in London. In 1855 he was a bookbinder in Paternoster Row. In 1864 he is florist, seedsman, &c., with a business supporting from twenty to thirty individuals. His career as a lover of flowers from the year 1840 to 1864 would fill many a long page. For the Yorkshire tailor's encouragement suffice it to say, he is one of three orphans inheriting weak constitutions. One was apprenticed to a tailor, and died a victim to overmuch confinement in-doors. The other was a clerk in a solicitor's office, and died from similar causes. The writer of this may long since have shared the same fate but for the love of flowers, and his determination to become—A FLORIST.

THE BLOOMSBURY FLOWER SHOW.

THIS most beneficial and successful Exhibition was held on the 15th instant, in the garden of Russell Square. There were 795 plants exhibited in the five classes, all of which were fuller than last year, particularly the children's class, which was then very empty. This year every prize was given away, whereas last year several were withheld.

Class 5, which was for plants not entered, was, as might be expected, a very large and showy class. Some people have condemned the introduction of such a class, saying that it was only offering prizes to plants many of which might be purchased on the day of the Show; but the great object of the Exhibition is to induce the poor to decorate their rooms with plants, and by exciting their interest in them to induce them to keep their rooms clean, and to bestow that attention on their plants which is necessary to keep them healthy. Many people purchased plants to exhibit in Class 5 who would not otherwise have had them, and having once become possessed of them, they will in nine cases out of ten take good care of them. Fifty-six prizes were given in sums varying from 10s. to 1s., amounting in all to £14 3s., and to each prizetaker a card was presented with a small picture on it, and a *fac-simile* of Lord Shaftesbury's autograph.

There were, we should think, between three and four thousand people present, and the Police Band and the Band of the 37th Middlesex Rifles attended gratuitously. The tent was supplied by Messrs. F. Edgington & Co., and was nearly 90 feet long and between 40 and 50 feet broad. The plants were arranged on tables down each side, and in a double line down the middle, and looked very well. Some of the best plants exhibited had been in the parish for three or four years. One gentleman gave to the Hon. Secretary, W. H. Bosanquet, Esq., £1 to be offered for the best tree Carnation next year. We fear that there will not be even a small class of that plant. A class for Auriculas or Polyanthus would be more likely to fill. It is of no benefit to offer prizes for plants which the poor are not in the habit of growing. W. Sowerby, Esq., of the Royal Botanic Society, was Judge. The tent was very prettily decorated with mottoes and banners lent by a lady in the parish. One man exhibited some Dahlias in good bloom, and had an extra prize for them. Another sent a small tub with some Potatoes and Radishes growing in it.

The exhibitors were divided into the following five classes:

Class 1.—Persons living in the Little Coram Street District.

Class 2.—Persons living in other parts of the parish.

Class 3.—Domestic servants.

Class 4.—Children in National, Infant, Sunday, and Ragged Schools.

Class 5.—Any plants not entered.

The first prize in Class 1 was taken by W. Thompson, 27, Little Coram Street, for a very fine Geranium. For Annuals, the first prize in this class was awarded to G. Bearden; and an extra prize to J. Verity, 29, Coram Street, for a group of Calceolarias, Stocks, &c. In Class 2, the first was taken by Henry Roberts, 24, Southampton Mews, for a fine Geranium. An extra and well-deserved prize was given in this class to Annie Roberts, of the same residence, for the model of a garden, fronting a toy villa, denominated "Bloom Grove." A brick wall with a neatly constructed gate enclosed the front of the garden, and a travelled path leading to the mansion was bordered with flowers of every description, including Verbenas, Stocks,

and Fuchsias, mostly in bloom. The whole exhibited great taste. In Class 3 there were some really splendid flowers, which at once showed the more favourable conditions under which they had been reared. In this class the name of Susan Hyde figured conspicuously, and she certainly exhibited some very fine plants, among which may be specially mentioned a beautiful Fuchsia. Elizabeth Griffin showed also a very fine Fuchsia, the best, perhaps, in the Exhibition, and worthy to take a place in a first-rate flower show. In Class 4, the first prize was taken by Julia Turner, also for a Fuchsia. The plants in this class were reared by children, and the care bestowed upon their growth was evident from their fresh appearance. Class 5 consisted of any plants not entered, and contained some very fine specimens of flowers; a magnificent flowering Geranium, exhibited by a person named Wheeler, taking the first prize. Susan Hyde's name (a cook, we were told, to a gentleman's family in Woburn Square), figured here again very conspicuously, and, among other things, was fine fresh Creeping Jenny, reared by a nurse in St. Giles's Workhouse.

At about six o'clock the Rev. E. BAYLEY addressed those assembled. He said he was speaking on behalf of himself and of the parishioners when he tendered thanks on their behalf to the owners and inhabitants of the houses of Russell Square for granting them permission to hold their Exhibition there that day. With reference to the Flower Show, it might speak for itself. At the first Show held in Little Coram Street, they had only eighty-four plants exhibited; at the third, which was held in Russell Square, they had between five and six hundred; and this year they had nearly eight hundred. With reference to the important subject of clean and tidy rooms, eighty-four persons last year sent in their names as competitors for prizes; but this year, having extended their invitation over the whole of the parish, upwards of three hundred had sent in their names as competitors. It had, indeed, been a very laborious task for them to visit the rooms, as they could imagine when he told them that in six weeks Mr. Hill and himself had paid six hundred visits each to the rooms whose owners had entered into competition. He was happy to say, that in this and for plants, in consequence of donations, they were enabled to give extra prizes, so that sixty-six people would receive rewards for clean and tidy rooms. With regard to awarding the prizes, there had been so great an improvement in that part of the parish where they first started the movement, that they had considerable difficulty to determine which rooms were the most worthy of receiving rewards. The only objection he had heard with regard to the movement was, that they intruded upon the privacy of these poor people, but he could assure his auditory that instead of that being the fact, the general complaint was, that they did not visit them often enough.

The prizes were distributed by the EARL of SHAFTESBURY. For plants exhibited by adults they consisted of sums varying from 10s. 6d. to 2s. 6d.; and for those exhibited by the children, of sums of 7s. 6d., 5s. 6d., 2s. 6d., and 1s. The prizes for clean and tidy rooms consisted of sums of £2, £1 10s., £1, and 10s., and we may mention that to Mrs. O'Brien, a poor lame woman, was awarded the first prize for clean and tidy rooms.

After the prizes had been distributed,

The EARL of SHAFTESBURY expressed the gratification which the business and the display of the day had afforded him. It was a most important movement, and it would effect great objects. It would be the means of teaching the working people how to look after their own affairs, how to improve their tastes and their condition, and raise themselves in the moral and social scale. It was, too, most gratifying to see little children who did not reach to his knee, coming up and receiving their prizes of 7s. 6d. and 5s., instead of seeing them running about the streets and acquiring evil habits and principles. He was particularly pleased with that portion of the movement which related to clean and tidy dwellings. He knew nothing that would more improve the condition of the working classes, and he wished them all success in the good work they had so well begun.

The Rev. E. BAYLEY moved a vote of thanks to the noble Earl for his kindness in coming there that afternoon to distribute the prizes, coupling with the same the name of Mr.

W. H. Bosanquet, the Secretary, who (said the rev. gentleman), deserved their heartiest applause for the interest and trouble he had taken in the whole affair.

The EARL of SHAFTESBURY in reply said he hoped next year to come and see the clean and tidy rooms himself.

Number of people who entered their names as exhibitors.....	409
Number of plants exhibited	795
Number of exhibitors about	450

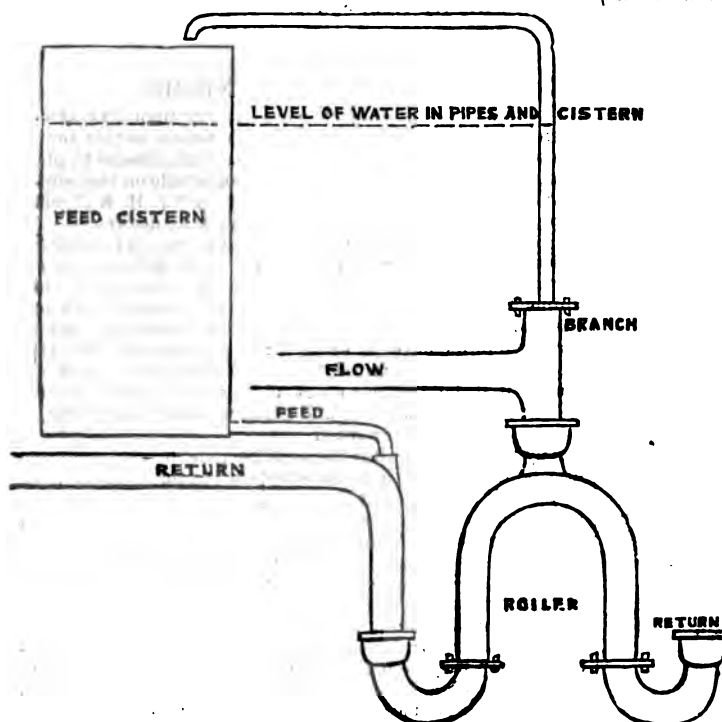
Number of prizes	16 of 10	0	
"	6 of 7	6	
"	17 of 5	0	14 3 0
"	20 of 2	6	
"	3 of 1	0	

Total..... 56

One person took four prizes.

Number of prisetakers 48

PREVENTING WATER BOILING OVER IN HEATING APPARATUS.



HAVING just seen the questions asked by "ORCHIDOPHILUS," and your admirable remarks on them, I beg to suggest another mode of dealing with the difficulty of water boiling over in heating apparatus, and that a very simple one, as you will see by the enclosed sketch.

It is accomplished by having a branch cast on the top of the flow-pipe, which serves to collect the steam made in the boiler, being higher than the piping immediately in connection with it, and then taking a small pipe, say one-inch bore, from the branch, and letting it terminate with a bend over the feed-cistern. Thus, any water which is sent over before the steam is returned to the feed-cistern, and thence to the boiler.

Before I adopted the above plan I was always annoyed in the same way as your correspondent complains of. Since then I have never heard any complaint. The boiler is one of Messrs. Wood & Tomlinson's, a cast-iron tubular one, the tubes being fixed longitudinally into the horseshoe ends, one of which is shown in the sketch.—P. O. WHITEHEAD.

[We are much obliged, for you certainly have improved on our open pipe by bringing it into the supply-cistern; but if that supply-cistern is large enough you will be troubled with little water or steam from the air-pipe.]

CHANGING THE SITE OF A KITCHEN GARDEN.

I AM thinking of changing the position of my kitchen garden, the present one being on the north side of the house, and so surrounded by high hedges and trees that the birds (jays and magpies in abundance), get at my Cherries and other fruit, and also the Peas. Having been a garden for the last twenty years, I think the ground must be exhausted; for the crops are very poor in spite of being well manured and the ground trenched in the winter. I propose making the new garden in a grass field in front of the house with south aspect, but am deterred rather by the west winds, which blow very strong, and also by the want of water. A hedge will remedy the first, but I do not know how the other will be supplied. The question I wish to ask is, Whether, after the garden is laid out, the grass should be dug in two spits deep and laid at the bottom so as to rot, or should be pared off and burnt, and then scattered over the plots of ground previously dug up. What would be best for a hedge, Privet or Laurel? I wish it to grow up quick. I shall leave the grass for paths, as I can keep them in order by the mowing machine. The intended ground slopes to the south, so that it will have a warm aspect. I am afraid I shall miss the pond which is in the old garden, but must manage as well as I can.

When I was first appointed to the living the old garden was full of large Apple trees with trunks as thick as my body. These I cut down, as they overshadowed the ground, but still it is very unproductive, and that is my reason for wishing to alter the situation. The Asparagus-bed is very old. Could I move any of the young shoots, or had I better buy fresh plants for a new bed? Should I begin to dig the new garden now, or wait till the autumn? —RECTOR, Kent.

[We thoroughly sympathise with you in your troubles. In addition to plenty of other birds, we had the other day for the first time a flight of jays, and hunger and a want of moisture made them very impudent; but they got scared away by the report of the gun. We do not think that the changing of the garden from the north to the south side of the house will save you from the attentions of the birds. We have from curiosity watched black-birds come and go regularly for a distance of half a mile; and therefore, though the new garden should not have the tree and other surroundings as an inviting harbour and shelter for them, we have no doubt that the birds will soon look after your fruit. There will be no security in the new garden more than in the old except thorough netting, and we have never been able to make netting secure enough to prevent the birds getting a fair allowance. That we would not grudge, but they invariably select the very best.

We are rather surprised with your account of the want of productiveness of the old garden. After removing the old large fruit trees, trenching, and manuring, it ought to have been very productive. The age of twenty years is nothing for a garden. We know some gardens that have been cropped for a period of three or four times twenty years, and now show anything but signs of wearing out. With proper rotations, and even heavy and close cropping, we see no reason why a garden should wear out, if treated as you say yours has been. Trenching, however, may of itself help to promote present barrenness if too much of the subsoil is raised at a time. We have seen ground so trenched that nothing would restore to productiveness but trenching it back again. If the soil is overdone with manure of an organic nature, a little lime would do much to bring its latent powers into operation.

We have every season felt so much the want of water, that we would advise you seriously to consider all eventualities before you remove the garden from the neighbourhood of a good garden to a position where you will have no water except what the rains supply, or what you can carry by

various means. If, as you seem to indicate, the whole ground from north to south slopes to the south, then pipes could easily take the water from the pond to the proposed new garden. The birds will be a trifle after all in comparison with the serious drawback, the want of water.

If you decide on the removal, we agree with your proposed arrangements. Privet would make the quickest and densest fence. We would trench down the top-spit pasture as you propose, and would not think of dissipating its valuable properties by burning. Burning pasture land can only be recommended when the grass has become of a hard unnutritive character, and when the remains of the burnt heaps would, when spread over the fresh-tilled soil, do much to promote a fresh carpet of sweeter and more nutritive herbage. Unless your old Asparagus-bed has a number of young plants in it—that is, from one to three years of age, it would not be worth while to move any of them. You may get nice two-year-old plants for no great sum. For ourselves, we prefer sowing thick, say this March of 1864, and planting them some 3 or 4 inches apart in 1865, when the shoots are about 2 inches high, and taking means to prevent a root or rootlet from being injured. We think the simplest way for growing Asparagus is to trench and dress the ground well in winter, and before planting time to throw it into shallow ridges, say 27 inches apart, level the crest of the ridge a little, place the roots of the Asparagus over it fan shape, cover with the soil, water, and then mulch with rotten dung. After trying many plans we like this better than beds. A little salt and fresh mulching every summer will be sure to benefit the Asparagus, and there will be little risk of rotting from damp.

The sooner you break down the ground the better, but go little beyond the staple. You may stir the bottom of the trench and leave it. The subsoil is best incorporated by only raising a few inches at a time.]

RIVERS'S ROYAL HAUTOBOIS.



We have already (p. 11) recorded our high opinion of this variety of the Strawberry; and we return to it for two reasons, of which the first is that we received a photograph, of which the above is a copy, with the following note relative to the discovery of the variety.

"I am perfectly charmed with the Royal Hautbois Strawberry; its clusters are enormous, and its fruit delicious. Its discovery was as follows:—In a bed of a thousand seedlings raised from Belle Bordelaise, and which seemed such a mass of foliage as to leave no hope that the shy-bearing

sort would give any variety, two large clusters of fruit were espied. The plants were carefully taken up and planted out as Nos. 1 and 2. The latter failed the next season, and was bad in character; but No. 1 was so fine that we named it the Royal Hautbois, and well it deserves its name."

Our second reason for recurring to the subject will be found in this extract from a little note on perfumed pink paper, the handwriting on which is always recognised with pleasure. "What could have induced our old forefathers to call this Strawberry *Hautbois*? It is French I am sure; but *Deep* (hant) and *Bois* (forest) neither describe the plant nor its dwelling, for the *Hautbois* does not delight in shady places."

This note reminds us of Scott's lines—

"So each mortal deems
Of that which is from that which seems."

inasmuch as that *Hautbois* is only a corruption of the German name for this species—*Haarbeer*. The first botanist we know who has mentioned it is Conrad Gesner, and he quotes a notice of it from Bock, whose works we have not seen. Tragus also mentions it, and states that it was found wild in Germany about Spire.

BEDDING GERANIUMS.

To treat of this subject more clearly than has already been repeatedly done by the able contributors to this Journal is a very difficult task, and it is rather with a desire to please than because there is a necessity for an article on the subject, that I give a somewhat lengthy reply to "J. H. K.," who, I hope, will find in it that clearness which he desires.

Presuming that a greenhouse, a cold frame, and a sheltered situation are at command, there will be no difficulty in raising any quantity of Geraniums; but all admirers of Geraniums have not these conveniences at command, and some have only a frame, and sometimes not even that, and the room windows have to serve for a greenhouse. To those whose means are limited I gladly devote this paper, convinced if it be the means of adding but a plant more to enliven the flower garden and gladden some heart, that my labour will be well rewarded.

Any time in July after the beds become furnished cuttings may be taken, selecting such shoots as run one over the other, and which would, if left on the plants, either crowd the bed too much, or be useless from becoming straggling, or being hidden by the foliage of the others. Judiciously thinning the shoots materially adds to the appearance of the beds, of which the beauty consists quite as much in the evenness of the plants as in their fulness of bloom. Before, however, any cuttings are taken, the surface of the bed should be completely hidden by the foliage, and when this is accomplished preparation may be made for propagating a stock of plants for another year. In taking cuttings let it be done so that an observer who does not see the operation performed could not tell that a cutting had been removed, and this can only be done by taking them from that part of the bed which is the most dense. In this way a dense overgrown part of a bed is made uniform with the thinner parts, in which, it is hardly necessary to remark, gaps should not be made by taking cuttings from them. In any case the plants will furnish cuttings by the beginning of August, which is a good time to commence providing for another year.

Having made choice of a young shoot with a growing point and two leaves or joints below it, cut it from the parent with a sharp knife a little above the lowest leaf, making the cut in a slanting direction towards the leaf, and when a number of these shoots have been taken cut each transversely through immediately below the lowest leaf, trimming off the two lowest leaves close to the stem, and the cutting will then have a couple of leaves or so and a growing point. The best cuttings are those having short joints, or the leaves near one another, and a top likely to branch immediately without any stopping. About half the cutting, say it is 3 or 4 inches long, should have the leaves trimmed off to form the future root portion of the plant, and on the other half the leaves are retained, and down to these the cutting is to be inserted in the soil. There are shoots the joints of which are often 2 or 3 inches or more apart. It is not necessary to insert more than one joint of such as these in the soil, re-

training a rather large leaf with the growing point above it, nor is anything gained by putting in extra-sized cuttings. Those shoots with three joints, or at the most four, are far preferable to those with six joints. If the shoot have two joints with the growing point it should be cut with a sharp knife immediately beneath the lowest leaf, and that leaf being cut off the cutting is all that could be desired; but if the cutting be no more than 3 or 4 inches long and have three joints with the growing point the two lowest leaves may be displaced, and the shoot be cut transversely under the lowest. The cuttings ought never to be taken from bad-habited sickly plants, otherwise they are likely to partake of these defects, but from those which are healthy and well constituted.

Though there is but one way of making shoots into cuttings, there are several methods of treating them afterwards in order to induce them to strike root. The best is to pot them singly into 60-sized pots, in a compost of loam one-half, leaf mould one-fourth, and river sand one-fourth. Silver sand is preferable to river sand, but not indispensable, for *Geraniums* will strike almost in any way if one end of the cutting is put in the soil. We place a rather small crock so as to lie flat at the bottom of the pot and cover the hole, and on this the least touch of moss or sphagnum, or the rougher part of the compost; we fill as many pots as we have cuttings with the compost, which should be sifted through a half-inch riddle or sieve, place a handful in each, then press it gently down with the hand, and strike off all above the rim of the pot with the open hand. The next process is to make a hole in the centre of each pot with a dibble, and, with the cutting in the left hand, we take up a pinch of silver sand between the thumb and fore-finger of the right hand and drop it into the hole; the cutting is then inserted in the hole up to the lowest leaf, and a little more silver sand is placed around the cutting on the surface of the pot. A run round the compost next the pot fixes the cutting firmly, and secures space for watering, a gentle tap on the bench completing the operation. We have now cuttings with their bases surrounded by sand, and not one will fail to emit roots and be a plant in fifteen days if placed in a greenhouse in a moist shady place, and the soil about them kept moist, but not wet, for too much moisture is quite as injurious as too little.

When well rooted the cuttings, or rather young plants, may be potted into 48-sized pots, and placed in a cold frame for a week or ten days until established, when they should be placed out of doors on coal ashes in a sheltered situation, and the point of each shoot nipped out at the third leaf. By the beginning of October they will be strong bushy plants if duly supplied with water, and as it is not safe to keep them outside any longer, they should be taken into the greenhouse, placed on shelves near the glass, and have abundance of fresh air daily in mild weather, and water once or twice weekly as occasion may determine, but none to be given until the soil becomes dry. The temperature should range from 40° to 50°, fire being only employed to prevent the mercury from falling below 35° at night. Air must be given when the thermometer reaches 45°, and the house should be shut up with a temperature of 50°.

In February the plants will be furnished with from four to six shoots, each of which will in all probability furnish a cutting, which, if there be the convenience of a hotbed, may be taken and struck; and these cuttings furnish nice plants by bedding-out time, and though small, afford a fine bloom late in the season. Such cuttings may be inserted either singly in 60-sized pots, or round the sides of a pan or pot, and being placed in a Cucumber-frame, they will be well rooted in about a fortnight or three weeks. They should then be hardened off by placing them in the greenhouse, shifted into 48's by the middle of March, and placed on a shelf, where they should be duly supplied with water, and have the points of the shoots pinched out in the beginning of April. If the cuttings are inserted round the sides of pots or pans, they should be potted off in March into 48's, and have the points of the shoots pinched out when the roots have taken good hold of the soil. These will be stiff nice plants by the beginning of May, when they should be hardened off in a cold frame for a week or so, and then removed to some sheltered situation where they can be protected with mats placed on hooped sticks should severe

frost occur. Though nice "staff," such plants are not equal to those struck in autumn, nor do they flower so well as older plants; but they are, nevertheless, very useful when the stock is short or the supply of autumn-struck plants not sufficient to fill the beds or parterres.

The autumn-struck plants in 48-sized pots, from which the last-named plants are taken, should be potted in the beginning of April into 24-sized pots. They will grow rapidly, and in ten days after potting may be removed to a cold frame, where, by covering in frosty nights with mats, and with due regard to giving air and water, they will by the second week in May be strong, dwarf, bushy plants, some of them more than a foot through, and for the most part coming into bloom. After a fortnight's exposure in some sheltered yet open situation they may be planted in beds, where they will at once produce an effect of which any gardener may be proud.

Now this system, I may be told, requires considerable house-room to carry it out. This is certainly true; but the extra size of the plants and the immediate effect they produce is worth the room and trouble; and those who try this plan against the ordinary methods will, I think, find one of the plants cover something like four times the surface, so that one-fourth of the number of plants will do the same work, give a greater effect, and fully a month or six weeks earlier than late autumn or spring-struck plants.—G. ARNIST.

(To be continued.)

SMALL LOCAL SCIENTIFIC SOCIETIES.

We should have very little difficulty in collecting the names of five hundred societies having for their objects some improvement or the acquirement of knowledge of various productions of nature. These objects are multitudinous, ranging from the growth of a large Gooseberry to the acquirement of a flora or fauna of all the British Isles. These societies are dotted about in every county, and each society is a centre from which diverge around it better habits, better tastes, and better knowledge. From time to time we publish what some of these societies are doing, and some of their doings in the report of the Bloomsbury Flower Show appear in our columns to-day; but we have a stout pamphlet before us which tells of still higher efforts, and evidencing still further advance in the pursuit of that kind of information which makes a man fonder of home, because there are his books and his other sources of pleasures which he finds are the only pleasures which have not their track traced by regret.

The pamphlet we have mentioned is No. 5 of "Transactions of the Woolhope Naturalists' Field Club." Now, very few of our readers, without a reference to their topographical dictionary, would be able to tell that this Woolhope or Wolhope is a village about eight miles from Hereford, one of the most lovely districts of England; and there amongst its quiet Apple orchards dwell many of the members of this Naturalists' Club; and not only is the Club flourishing, but the President, C. Wren Hoskyns, Esq., in his annual address, thus rejoices over the increase of such local associations:—

"I cannot, however, enter upon the duty of endeavouring to recall the proceedings of the Woolhope Naturalists' Field Club during the past year without indulging a reflection, which occurs to me very strongly, upon the great extension of interest which has taken place in those pursuits which form the out-of-door study and objects of societies like our own, and have led to their increased establishment in the surrounding counties and districts. Nothing, perhaps, in the year has been more remarkable than the evidence of this which it embraces in the growth of these kindred associations around us, and the joint meetings and augmented interests to which they have from time to time given rise.

"Beside the Malvern, the Cotteswold, and the Warwickshire Clubs, which we formerly recognised in the adjoining or neighbouring counties, we have now to welcome the restoration of the Dudley and Midland Geological and Scientific Society, the Severn Valley Field Club, the Oswestry, the Bridgnorth, and the still-more-recently-established Caradoc Club, occupying areas that well deserved the scrutiny of separate societies, while their establishment has increased

the opportunities of mutual acquaintance and united labour amongst the members resident in the different districts."

He then proceeds to remind the members of their various tours during the past year, of which chatty interesting portions we will only give one relish.

"The second meeting of the Society, which took place on the 7th of July at the Craven Arms, near Ludlow, was one that will be long remembered by those who were present. It was a joint assemblage, in fact, of not less than five societies, consisting of the Oswestry, the Dudley, the Bridgnorth, and the young and promising Caradoc Club, with our own. The place chosen presented several attractions—the ruins of Stokesay Castle, for the inspection of the archaeologist; the Wood of View Edge, said to be the only place in England where the *Astrantia major* is supposed to grow wild, of which abundant specimens were found, and to the judgment of some, rather cruelly brought away, suggesting to the mind of our late Secretary the very just remark, that 'it is not wise to talk too loudly about a scarce plant;' for several of our number who climbed the heights of the wood in search of it, came out of it with the rare *Astrantia* ruthlessly torn up, in some cases by the roots, and borne in ruinous triumph on their hats, and other parts of their dress. 'I took two specimens—for I do not like to exterminate'—adds his communication; but if all the septuagint of naturalists assembled on that day were equally forbearing, the exterminating process will hardly have received a very exemplary check.

"But the Wood of View Edge contained another attraction in its celebrated quarry of Aymestry limestone, where nearly the whole of the rock, exposed to a thickness of from 30 to 40 feet, is composed of *Pentameris Knightii* cemented together."

We pass through many such pleasant passages, until we come to the chief contents of the pamphlet, entitled "The Day at Malvern and the Mistletoe in Herefordshire." It is the work, the exhaustive work, of Dr. Bull, for very little relative to the Mistletoe is not here collected and recorded attractively. Here are detailed its mode of propagation and growth, the trees it lives upon in the county, the recorded instances of its growth on the Oak in England, and the romance of its history in times past and present. Gladly would we publish each of these sections entire, for they are full of interesting information; but we cannot afford the space, and must confine our further extracts to some from the notes on the Mistletoe on the Oak. Dr. Bull says:—

"The occurrence of the Mistletoe on the Oak is at once so rare and so interesting, that I have not confined myself to this county in my inquiries about it, but have taken some pains to ascertain its existence, at the present time, in all the instances which have been recorded as occurring in England. The following instances I have been able to get well authenticated:—

"THE OAK AT EASTNOR.—Ten days since, I visited this Mistletoe-bearing Oak. It is situated by the side of the drive leading from the park up the Ridgeway hill towards Malvern, about 200 yards beyond the lodge. The Oak may be some eighty or ninety years old, and the Mistletoe grows freely upon it. It is most luxuriant high up in the tree where three large branches grow very near each other, having in each instance destroyed the bough beyond the place where it is situated. It is also growing in four other places in the tree, one fresh yearling plant shooting straight out from the main stem of the tree about 12 feet from the ground. One large bunch of Mistletoe growing in a large branch many feet from the main stem was dead and decaying, but without having killed the branch. The Mistletoe plants are of both sexes, and the females bear berries freely. It is more slender and pendulous, with smaller and thinner leaves; or, in other words, it is not so stiff and rigid, and short-jointed, as it usually is when growing on the Apple tree. During the twelve years I have known this tree the Mistletoe has increased upon it, and the Oak is already beginning to show signs of suffering severely from the parasite. Upon the large moss-covered branches it was curious to observe the great number of Mistletoe seeds which had been deposited by the birds."

Dr. Bull gives similar notices of specimens on Oaks at Tedstone Delamere; Badams Court, Sedbury Park, near Chesham; Burningsfold Farm, Dunsfold, Surrey; Hackwood Park, near Basingstoke, Hants; and the Plymouth Oak, by

the South Devon Railway. These are the only six instances which Dr. Bull has been able to authenticate; and he, as well as ourselves, will be much obliged by any of our readers informing us of other instances within their own knowledge.

WORK FOR THE WEEK.

KITCHEN GARDEN.

Dig in haulm, stumps, and the refuse of crops directly they are over. At this season there is seldom any ground to spare, for it should be remembered that the supply for several months in winter and spring will depend on the diligence now exercised in planting out as large a supply as possible of those vegetables most likely to be in demand. Potatoes and other crops soon coming off may be interlined with Broccoli or Winter Greens; and where there is not sufficient room, a quantity may be planted at 1 foot apart to remain till ground comes in by the removal of other crops, when the whole may be again planted at proper distances, or every other row and each alternate plant of the remainder removed to vacant ground. The above will answer well where the space is limited, more particularly for those kinds coming into use in spring. Cabbage, make a sowing of East Ham Cabbage for early spring use, and the last sowing of Coleworts. As soon as the caterpillars attack any of the Cabbage tribe, give them a slight dredging with white hellebore powder in the morning. Celery, pay strict attention to the early crops. Let it be gone over with the hand and all the offsets taken off, and, where practicable, let it have a thorough drenching with manure water, after which, on the following day, give a slight earthing-up to prevent evaporation. Peas, make a sowing of Early Frame; if the autumn is fine, they may be useful. Shallots and Garlic, when they are ripe take them up and hang them in bunches in a dry shed previous to placing them in store for use. Make a sowing of White Stone Turnips.

FRUIT GARDEN.

The tendency to excessive luxuriance frequently exhibited by espalier trees, renders the operation of stopping and shortening shoots more particularly essential. The whole principle of pinching is merely this—in the first place to pinch all young shoots not necessary for the framework of the tree; secondly, to stop those shoots which threaten to overgrow their neighbours, by which means a due equilibrium of the branches will be maintained; and, finally, having commenced a system of repression, to continue it in regard to the lateral shoots which are developed by reason of this system of stopping. When time will permit, Currants, Gooseberries, and Raspberries will be benefited by the remaining wood of the present year's growth being thinned, leaving only sufficient to furnish next season's crop. Strawberry-runners that were laid some time ago in three-inch pots are now ready for shifting into five-inch ones. For this purpose use a compost of two parts friable yellow loam and one part of well decomposed dung. Take care that the pots are well drained, and have them placed in the south aspect, and on boards or slates raised a few inches above the surface of the ground to prevent the worms getting into them.

FLOWER GARDEN.

Climbers on walls to be attended to as they advance in growth, keeping the young shoots neatly tied-in, &c. The climbing Roses will also require to be gone over occasionally for the purpose of cutting off decayed blooms, and any weakly old wood should be cut out at the same time to allow of laying-in the strong young wood which will bloom much finer next season than the old wood would do. Any of the Perpetual Roses that have flowered very freely, to be assisted by a liberal watering with manure water from the stable or farmyard-tank; indeed, too much of this can hardly be given to any of the autumn-flowering varieties. Carnations and Picotees will require copious waterings during the present dry weather. Earwigs are extremely destructive to this class of flowers by eating off the lower part of the petals. It is usual to trap them in tobacco-pipe heads placed on the tops of the sticks which support the plants. These, however, must be new, for if they have been smoked with, the smell of the tobacco will prevent the earwigs entering and thus defeat the object in view. As the seed-pods of Fancies ripen they should be gathered, and dried in

a shady place. Commence the layering of Cloves, Carnations, Mule Pinks, &c., of which there is rarely an overstock.

GREENHOUSE AND CONSERVATORY.

Specimens that have matured their season's growth should now be more sparingly supplied with water at the root, in order to promote the ripening of the wood. Orange trees or other plants known to be liable to the attacks of red spider must be frequently examined for this pest, and well washed with the engine immediately it is perceived, taking care not to bruise or injure the foliage, and placing the affected part so that every leaf may be reached. In keeping up a stock of plants there must necessarily be, besides those depended on for the principal show of bloom, younger branches of the same family, which are growing onwards to supersede their seniors whenever old age or decay shall consign the latter to the rubbish-heap. Such plants as Epacris, Leschenaultias, Pimeleas, Aphelexes, and others of the same habit, which have been kept for late bloom and are now over, should be placed in the house with a north aspect, or in deep frames or pits with the sashes turned towards the north, having first picked off the old remaining blooms. Here, with a gentle syringing once or twice daily, the plants may remain till a new growth commences, when any pruning they may require may be given; and they may afterwards be placed in more favourable positions for ripening their wood.

STOVE.

Admit more air into the house as the season advances, because, although this is the period when every advantage ought to be taken of heat and light, still the confinement of the stove is apt to draw the plants, especially if carried out late in the season. Growth is now required in most kinds of plants; but the great art is to harden or perfectly mature that growth, or the plants will suffer much during the winter. Many of the plants in an advanced state may now be placed in the greenhouse, which should be closed on cold nights. A number of Orchids will by this time have made their growth, and may be removed gradually to a drier and cooler atmosphere. Those which still continue growing must have the syringe two or three times a-day, and a humid atmosphere must be maintained by well watering every part of the interior. At the same time plants growing on blocks or suspended in baskets should be frequently soaked.

COLD PITS.

The stock here will probably require re-arrangement at this time, as some of the specimens, having completed their season's growth, will be better in a shady place out of doors, and their removal will allow of giving more space to those left. Young growing stock and late-flowering plants that have yet to make their season's growth should receive the most careful attention, as, if well treated, they will make rapid and vigorous growth at this season, and nothing in the way of good soil, careful potting, or proper accommodation will compensate for the want of this. Indeed, there is no possibility of securing free growth from hardwooded plants in bright hot weather, except by moderate shading and maintaining a moist atmosphere by sprinkling the plants overhead morning and evening, and air must be given liberally to keep the wood strong, avoiding as much as possible exposure to drying winds.

W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

On the 17th we were favoured with a thunder shower, which revived vegetation with us wonderfully. As usual, we on the height had but little of it in comparison with those in the valley; but we are thankful as we were fast getting out of water. Our first and second Marrow Peas were fast ripening, and, besides mulching, we were helpless as to prolonging the season by other means. The shower gave us some hundreds of gallons in our tanks, but before it came, in our chief reservoir for supply we did not have a couple of hogsheads. But for our sewage tank we must have been very badly situated, and had the mortification to see plants dying without the possibility of helping them. As it was, we could only single out the plants that showed signs of suffering. The excessive heat of the week has pretty well evaporated all that the thunder shower gave us, but it

came at the right time, and there are signs that it will not be long before we have another refresher.

We never saw corn crops looking better in this neighbourhood, and the warm rain of the 17th would do much to swell out and give substance to the grain. Some neighbours, indeed, grumbled that there was not enough of moisture for the Turnips; but it is the nature of some people ever to be looking for causes of complaint instead of reasons for thankfulness. We believe, however, that in nine cases out of ten this grumbling is more a matter of habit than of feeling. The grumble is the safety valve that gets rid of the noxious pent-up steam, and leaves behind it the sturdy, kind, large-hearted Englishman. Let even the go-a-head politician have his grumble out, and it will generally be found he will be the last to seriously think of leaving the shores of old England. Grumble or no grumble, the summers of 1863 and 1864, in this part of the country (Hertfordshire), ought to show the importance, especially in the case of contemplated gardens, of making a water supply a matter of primary consideration. We have known of some cases where great expense was incurred in making a garden before a supply of water was taken into consideration. A good position and a good soil, the very things for general field crops, will not be sufficient for succession crops in a garden without water being at command. Even when water can be had, but must all be conveyed by pail or barrel, the labour of applying it is very great when compared with that involved when a reservoir of water can be had in so elevated a position that by means of taps in the garden and a long hose, any part may be flooded at will. Whatever the primary expense, such gardens, so differently situated, cannot justly be compared as to the necessary labour power.

We agree very much in almost everything advanced by the writer of the article from the "Scottish Gardener," at page 52. We demur, however, as to the mode of contrasting the value of the *produce from the garden of a gentleman* and the produce from a market garden. In the latter case quick returns and a quick clearing of the land for another crop must be the chief objects. In the former case a constant successional supply must be the great aim. The cartloads of early Cabbages, Cauliflowers, Lettuces, &c., are what pay the market gardener. Such loads of stuff in a private garden would be of little use, unless to give the establishment a distaste for vegetables for months afterwards—a thing the gardener ought to guard against, instead of attempting to promote. True, such produce might be sold; but here again, the very isolated position of the majority of gentlemen's gardens, which of itself gives an enhanced value to vegetables and fruit obtained fresh and at hand, would often render the attempted sale a matter of anything but profit, from the absence of, or the distance from, a market. The different circumstances demand a different estimate of the value of produce. So much is this the case, that we know instances of first-rate gardeners declining the offer of a gentleman's large kitchen garden in the country, merely for the keeping it up, and without any rent, and go to the neighbourhood of a town, and make money there, though they paid from £5 to £8, or more per acre for their land. They were wise enough to know that, the establishment having left for some years, they could not procure manure for the garden, and even if some were obtained, that then they might look in vain for customers for the produce. If the garden were very large, they might manage by looking after the fruit, and throwing all the rest of the ground into Potatoes and grain crops, not otherwise.

The very circumstances, therefore, that enhance the value of garden produce in the country above that which obtains at Covent Garden, would just so much lessen its value if you were forced to turn it into a marketable commodity. We quite believe gentlemen when they tell us that they could supply their servants cheaper with vegetables from Covent Garden than from their own garden. This must be the case even on the division-of-labour principle; but we as thoroughly believe them when they tell us that for their own use there is no comparison between that bought in a market and that grown in their own garden, so far as richness in flavour is concerned. This would be still more seen if a more simple system of cooking became fashionable. A satirist has told us that flint soup is a capital thing, if the flints are well boiled in some rich gravies, and stock liquor.

Cauliflowers, Peas, &c., are so overdone with cream, melted butter, and sweets, that the original flavour is lost. Some people would actually experience the pleasure of a fresh sensation could they partake of a nice sweet Cabbage simply well boiled with a grain of carbonate of soda in the water. Having everything, therefore, fresh, in good order, and in constant succession, ought ever to give a value to the produce of private gardens above that for which it can be bought in such markets as Covent Garden, as the bulk of the providers there study quick returns, rather than constant, regular successions. Where private gardeners are expected to sell, they soon fall into the market-garden system, and instead of a little of this and a little of that at a time, they give up growing in rows, and grow in quarters and acres, clear the ground at once, and begin again—a good plan where there is a ready market, but a poor plan when a family must be supplied well every day. After all, even at general rates, we have met with few kitchen and fruit gardens which would not pay their expenses well where there was a family to consume the produce.

The great difference between the private garden and the market garden is just this—that the latter is exclusively a matter of profit and loss; the former is greatly a matter of pleasure. Gentlemen are apt to draw the comparison, looking merely at what comes to the table, and thinking nothing of what merely gratifies the eye. In many cases pleasure grounds and flower gardens cost two-thirds or three-fourths of the outlay, and no profit in general can be derived from them except pleasing the sight. Nothing is so expensive as a well kept lawn. You go over it at least once a-week, and it is only nice after all, yielding nothing but pleasure to the eye. It is a little strange, that in most small new places, the really useful parts—the kitchen and fruit gardens—are curtailed as much as possible, and as much room as possible given to pleasure ground and lawn. And then there is nothing more common than for the proprietors of such gardens to look at the sum total, and then tell their friends somewhat confidently, that every Cauliflower that comes to table, and every dish of Strawberries, and every bunch of Grapes must cost little less than this or that, when the whole of the eatables put together may have cost little more than a tithe of what was spent for mere pleasure and appearances. Take these things out of the way—allow something for freshness and quality, produced by regular successions in fairly managed private kitchen gardens, and then, even on the point of value received, there need be no fear of competition with market gardens.

We have nearly finished the third successional lot of Cauliflower, the great heat causing even some of the fourth lot this season to show rather prematurely. Watered the fourth and fifth succession with sewage water, and covered the ground with short grass and litter, to keep the heat out and moisture in. The sixth and seventh successions, planted among other things, would merely have a little clean water, as they are not established enough for stronger doses as yet. Watering when we could obtain any, and mulching and shading when we could not, have been the chief work in the kitchen garden. In some of the hottest days, we just spattered frames and houses of Cucumbers, &c., with a little whitened water, which prevented evaporation going on so rapidly as it would otherwise have done.

FRUIT GARDEN.

Much the same as in previous weeks. The flowers of sulphur daubed against the back wall of the orchard-house has pretty well done for the red spider where it had appeared. Plums are now coming in, and are useful from pots at present. Some ants had attacked a few of our best Cherries. The fruit touched were carefully gathered and removed. A little guano was strewn along the ground, and especially close to the foot of the wall, and well watered with manure water. We have seen no ants since. If something of the sort were not done we should expect them to lodge in the Peaches, &c. A good watering of lime water will generally have the same effect. If the ants are not killed they will be sure to take themselves away to other quarters. When fruit trees on the open wall are infested with ants, earwigs, &c., a good plan is to lash the wall well with clear lime water, which will tend to bring the most of them to the ground, and then run a line of paint, say 4 inches wide, along the bottom of the wall, the paint con-

sisting of equal parts of oil and tar. The oil prevents the tar hardening quickly, and so long as it is soft nothing will pass over it.

Removed all coverings from vinery-borders, so that these might have all the benefit of the bright sun to warm them. This was done on Monday last. When we expect a shower we will throw a dusting of superphosphate over the surface. If no rain come soon we will give a manure watering. Had the week been cold instead of hot we would have thrown some litter over the border to keep the heat in, raking it down when the sun shone.

Figs in our little house are rather too plentiful. We let them pretty well look after themselves. Our plants are as rough-looking as rough can be, but then they always bear well. Not to speak of others in pots in the orchard-house, we have two small plants of that honeydrop Fig the White Marseilles, of Mr. Rivers's fertile variety. We used to grow the common Marseilles, the fruit equally good; but then, do as we would, we never obtained a good crop of them. Mr. Rivers told us that there were two distinct varieties, the one always shy in bearing, the other always very productive. We find this to be the case. The second crop is now ripening, and there is a heavy succession of smaller ones for the third crop. The flavour of this Fig is delicious when cracking and showing its rich globules of juice. For a sure supply, however, nothing beats Lee's Perpetual or the Brown Turkey, as we believe them to be identical.

This is just the weather for fine Melons. Lest they should be prematurely ripened by a fierce sun, it is well to shade slightly for a few hours at the hottest time of the day, and give air plentifully, and especially give it early. In such weather as last week, air all night would be desirable, and the saashes should be freely tilted by six or seven in the morning. When the weather changes our practice in this respect must also change. Meanwhile, we may state as a secret which we cannot keep, that many mishaps under glass are the consequence of giving air too late. If air is admitted early there is no chance of steaming, scalding, scorching, or burning, as the house heats gradually, and the ventilation and the sun's rays together keep the enclosed atmosphere in motion. When the house is opened after the confined vapour has condensed on fruit, &c., the free opening will do as much harm then as keeping the house shut. In such misadventures very little air should be given at first, and the floor kept moist, and the house shaded, until the usual healthy state of things is restored.

ORNAMENTAL DEPARTMENT.

The dry weather has reduced mowing and machining the lawns to a minimum. The chief care has been to keep plants in flower-beds alive by giving a drop of water to those flagging, and mulching others with a little leaf mould or very rotten dung, as stated last week; we would give more if we had it. By such means we have as yet kept flower-beds and borders in fair condition. We have given sewage and other manure water to Dahlias, and would have done the same to drooping herbaceous plants if we could have afforded it. Hollyhocks would also have had such help, as without it the spikes will be dwarfer than usual; whilst, in our opinion, other things being equal, the taller the spike of a Hollyhock, the more majestic it will be.

The rain on Sunday gave a good opportunity for sweeping walks, and rolling them firm on Monday morning. It came so gently that even florists' flowers of all kinds, as Pinks, Carnations, and Picotees, were greatly benefited. The hot weather is so trying to Carnations that a slight syringing of an evening would do them much good, even when watering is not desirable. Syringing such plants as Brugmansias out of doors on evenings when the atmosphere was cloudy after a hot day, also did much good to them, refreshing them very much. When the sky promised to be clear at night, the almost sure free deposition of dew did away with the necessity for syringing. We have had beds of Calceolarias, very languid at night, but all right in the morning, as every leaf and spray was loaded with dew. Picotees and Carnations, of the best kinds, may now be layered; Cloves and the commoner kinds will strike freely by cuttings, with a little bottom heat, and cuttings may be obtained when the shoots are too short for layering. The cutting is easiest made by catching the lower part of the shoot with one hand so as to steady it, and then, taking hold of the top of the shoot with

the other hand, putting it out at the second joint with a sudden jerk. Generally it will come out so clean and nice, that no cutting across with a knife at a joint would equal it. The cutting needs no more making, unless a little film should be left remaining. Finks may be more easily propagated the same way; and at this early season they will soon strike in sandy soil under a hand-light, provided it is shaded during the hottest part of the day, and a little air given at night. Carnations strike better when there is a little bottom heat below the light soil on which the hand-light rests. Early Pansies may now be struck in a shady place, or the old plants be divided, or seed collected from favourite kinds. Those in full bloom would like plenty of water and rich mulching, and then they will keep on through the autumn. Dahlias at all forward will need tying, thinning of shoots and foliage, and traps used for earwigs, &c.

No weather could be better for hardening the shoots of Pelargoniums that have finished blooming. If the weather be very hot and dry it will be advisable to water the ground on which the pots stand without watering the surface soil of the pots. Plants blooming and those coming on in succession will want plenty of water. Make sure that the water goes over the whole surface soil, instead of making a hole close to the stem of the plant. Fine plants are thus injured and destroyed by gangrene, mouldiness, &c.

Such hardwooded plants as Heaths are best kept in this weather under frames, with the sashes facing the north, and air on not only at top but also beneath the bottom of the frame all round. Epacris may now have plenty of sun to ripen the wood, as the flowering greatly depends on that. All potting should now be rather moderate as respects shifts, in order that the pots may be filled with roots before the end of autumn. Large shifts should only be given at an early part of the season when the whole summer is before them. The same rule holds good even with stove plants.

When greenhouse plants are placed out of doors all those with fine hair roots, and all that are at all tender should have the pots protected from the fierceness of the sun, even although the head of the plant should be fully exposed. Such plants demand careful watering, or insects or death will be the ultimate consequence.—R. F.

COVENT GARDEN MARKET.—JULY 23.

The market continues to be well supplied notwithstanding the dry weather which prevails. Pines, Grapes, Peaches, and Nectarines, are both good in quality and sufficient to meet the demand. Heavy consignments continue to come in from abroad, and comprise, among other things, Apricots, and Green Gage Pears. Good Jargonelle Pears are sent in from the Channel Islands, and there are now also some of home growth. Raspberries will soon be over, and Strawberries are getting scarce. Green Walnuts, for pickling, are bringing from 6s. to 10s. per bushel.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples ½ sieve	1	6	0	0	Mulberries quart	0	0	0	0
Apricots doz.	1	0	3	0	Nectarines doz.	6	0	15	0
Cherries lb.	0	6	1	6	Oranges 100	10	0	16	0
Currents, Red, ½ sieve	2	0	4	0	Peaches doz.	12	0	30	0
Black do.	4	0	5	0	Pears (Kitchen) bush.	0	0	0	0
Figs doz.	4	0	8	0	dessert doz.	2	0	5	0
Filberts & Nuts 100 lbs.	0	0	0	0	Pine Apples lb.	4	0	7	0
Gooseberries ½ sieve	2	0	4	0	Pines ½ sieve	4	0	7	0
Grapes, Hamburgh lb.	2	0	5	0	Quinces do.	0	0	0	0
Muscats 100	6	0	12	0	Raspberries lb.	0	4	0	8
Lemons 100	4	0	10	0	Strawberries punnet	0	6	1	6
Melons each	2	6	5	0	Walnuts bush.	14	0	20	0

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes each	0	4	0	6	Leeks bunch	0	4	0	6
Asparagus bundle	0	4	0	0	Lettuce score	0	9	1	6
Beans Broad, ½ sieve	1	6	0	0	Mushrooms pottle	1	0	2	0
Kidney ½ sieve	2	0	3	0	Must. & Cress, punnet	0	2	0	4
Beet, Red, ... doz.	1	0	3	0	Onions bush.	0	4	0	6
Broccoli bundle	0	0	0	0	pickling quart	0	6	0	8
Brussels Sprouts ½ sieve	0	0	0	0	Parsley ½ sieve	1	0	1	6
Cabbage doz.	0	9	1	6	Parsnips doz.	0	9	1	6
Casheews 100	0	0	0	0	Peas quart	0	6	1	0
Carrots bunch	0	5	0	8	 bushel	2	0	5	0
Cauliflower doz.	2	0	4	0	Potatoes sack	3	0	12	0
Celery bundle	1	0	2	0	New bushel	5	0	6	0
Cucumbers each	0	6	1	0	Radiishes doz. bunches	0	6	0	6
pickling doz.	0	0	0	0	Rhubarb bundle	0	0	0	0
Endive score	1	2	2	6	Savoy doz.	0	0	0	0
Fennel bunch	0	3	0	0	Sea-kale basket	0	0	0	0
Garlic and Shallots, lb.	0	8	0	0	Spinach sieve	2	0	4	0
Gourds & Pumpkins, each	0	0	0	0	Tomatoes doz.	1	0	3	0
Herbs bunch	0	3	0	0	Turnips bunch	0	4	0	6
Horseradish bundle	1	6	4	0	Vegetable Marrows doz.	1	0	2	0

TO CORRESPONDENTS.

* * We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

GRAPES SHRIVELLING (J. D. D.).—Well they may on a sandy soil, and the temperature often 105°. As the crop is so heavy give weak liquid manure once a week; water abundantly; mulch the surface with coarse-mat fibre refuse an inch deep; give air more freely, and leave the ventilators open at night during this very hot weather.

LEECH-LIKE GRUB ON PEAR LEAVES (C. P.).—It is the "Slimy Grub" in the gardener's vocabulary, and the grub of the *Scelmisia ethiops*, or *Pear Saw-fly* of entomologists. Damping with slaked lime destroys them.

GRAPES (H. F.).—The three bunches of Black Prince Grape exhibited by Mr. Hill, Keele Hall, Staffordshire, weighed 13 lbs. 10 ozs., and were not "bunches" weighing 13 lbs., which is the rendering of your note. Great credit is due to Mr. Hill, who, by his skill and perseverance, has succeeded in accomplishing such extraordinary feats in Grape growing. If you will refer to Vol. V., p. 284, you will find, in a notice of the gardens at Keele Hall by Mr. Fish, some valuable information relating to the means at Mr. Hill's command; and when we add to these his well-known skill in Grape culture, we arrive at the conclusion that such enormous bunches are produced by superior vinerie and superior management. If you wish to equal such you must provide the same means, and bring an equal amount of skill and perseverance to bear on the cultivation of the Vines.

STOPPING CHRYSANTHEMUMS (Dorset).—It is not safe to stop the large flowering Chrysanthemums after July, and Pompones later than the first week in August, and this will make the blooming late.

SHALLOTS AND ONIONS MOTTLED (H. S. C.).—They are suffering from grubs, which eat into them and cause a mouldiness at the root. The moment marks of their presence are observed the beds should be watered with strong lime water made by placing half a bushel of quicklime in a hogshead and pouring water upon it, and adding half a bushel of soot. Allow this liquid to stand twenty-four hours, then water the beds with it. Soot water is such a stimulating manure that it is advisable to water the crop of Onions whenever dry weather occurs—that is, when the Onions are growing; and if applied sufficiently early, or before the fly deposits eggs, it is a good preventive.

ROSES AT CHRISTMAS (Ignorantia).—If the Roses that were forced early are strong, and the wood well ripened, they will answer the purpose. They should now be cut down to four eyes and plunged in coal ashes on the north side of a wall; but prior to this they should have been potted in June, and have been brought into a state of rest by withholding water. They will require copious supplies of water and frequent syringings overhead whilst on the northern aspect, where they may remain until the last week in September, when they should be placed in a cold frame or pit. By that time they will have made new growth, and must be kept clear of insects and have air daily, with protection on cold frosty nights. Early in November remove them to a house with a night temperature of 45°, with a rise of 10° to 15° by day with sun and abundance of air, increasing the temperature so that it may be 50° by the beginning of December. These plants may probably furnish blooms at Christmas if the precaution be taken to retard them if too early, or forward them if too late by placing them in a higher temperature. The most certain method of having Roses late in autumn up to Christmas is to grow a selection of the best Hybrid Perpetuals, in pots in a cold frame, and after they have bloomed in summer to cut them down to four eyes, or, if young plants, they must not be allowed to bloom, but have the blooms taken off, and be cut back to from four to six eyes by the 1st of August. If duly supplied with water, and the lights kept off until October, they will, for the most part, be showing finely for bloom at that time; and the lights should be drawn down in mild weather, but replaced in wet weather. In frosty nights a protection of mats will be necessary. They will come into bloom late in October, and the latest being removed to a greenhouse in November, when the bloom buds are about the size of a marble, will flower in about six weeks. A temperature of 50° is necessary to secure the expansion of the flowers.

BOOK (J. Smith).—Mr. Mills "On the Pine Apple" gives the usual culture in pots. Hamilton "On the Pine Apple" details his mode of culture by planting out.

PLUM TREES BLIGHTED LAST YEAR (Ada).—Having lost their leaves last year they were unable to make growth so as to bear this year, but being now vigorous they will be fruitful probably next year. Mulch over their roots to keep moisture in the soil during this very dry weather. Send five penny postage stamps with your direction, and order "Fruit Gardening for the Many." It will go free by post, and contains full directions on the subjects you name.

CLOVER SEED (B. H. W.).—What you state does not alter our information. Our quantities were taken from official returns. It is quite true a small quantity of Clover seed comes from France and the United States, but the quantity is not specified, but is included in the totals we printed. We stated that Cambridgeshire is the county where the home-growth of Clover seed chiefly prevails; and the other counties you name are all in the area we characterised as being mild and with a small rainfall.

GREEN GAGE UNFRUITFUL (P. Q.).—Being on a wall having a north aspect, and having no sun shining on it until 4 o'clock, is the cause of the unfruitfulness. The wood does not ripen sufficiently to produce perfect blossoms. The Magnum Bonum is a harder variety.

BLOTCHED ROSE LEAVES (An Old Indian).—The brown blotches are caused by want of moisture at the roots and the dry heat of the wall. Liberal syringings, a gallon of water to the roots of each tree every evening, and mulching over the roots to keep the moisture from evaporating, will be your best treatment. Cut away the great sucker without mercy.

WEED ON LAWN (S. J. C.).—It is *Prunella vulgaris* or Self-heal. It will be injurious to your lawn, and we recommend you to employ a few women with old knives to root it out.

GOOSEBERRIES, CURRANTS, AND RASPBERRIES IN A KITCHEN GARDEN (Easter, Kent).—We expect an article from one of our contributors on this subject; but in the meantime we may say that in most small gardens, and in some of considerable size too, the old-fashioned mode of planting Gooseberry and Currant trees in borders by the side of walks has many advantages, and the space between the trees and the edging may be occupied by any low-growing crops, and not unfrequently by flowers. Raspberries, however, had better be planted in the coolest part of the garden, and if it is a little moist they will do all the better. Black Currants also like a cool soil, although they do well in one of a contrary description. Of the varieties of these fruits, the best Black Currant we have grown is Black Naples. The Red Dutch and Willmot's Red are both good, and so is Baby Castle, which ripens late and bears well. The White Dutch is as good as any White variety we know. There is a pale red or hybrid kind called Champagne, admired by some. In Raspberries, Prince of Wales is a stronger grower than the Fastolf, although the latter excels it in size of fruit. The Double-bearing is also useful; and the White Antwerp is of use at table. The varieties of Gooseberries are infinite, and it would be difficult to give advice on this head without knowing which was wanted; but in general we may observe that the small kinds are better flavoured than the large ones. The old Turkey Red, called in some places Champagne, is hardly excelled anywhere; neither is the Green Gage, but these do not fill a basket so quickly as the larger kinds. The large white and green kinds are very prolific, although none are more so than the old Rough Yellow, called Yellow Lion in the London markets. Generally speaking, the darkest reds are most admired for preserving, and the colour is much improved when they are grown in the full sun. The Warrington is much used for preserving.

RHODODENDRONS, WATERING, &c. (S.).—As you have commenced watering your Rhododendrons you must continue doing so until heavy rain falls, after which the moisture in the atmosphere will preserve them for a few days, and they will more gradually and naturally ripen their shoots. To leave off watering in dry weather after having continued it some time is bad practice. If the short grass upon your beds does not appear unightly, you might let it remain until later in the summer, as it will assist in retaining the moisture. If the soil be stiff, digging in sand that is not impregnated with injurious mineral matter will be beneficial. Generally speaking, drift sand from a road or river (not a tidal one), is better than pit sand, but whatever is added to Rhododendron-beds must be only worked in within 3 inches of the top where the roots are, and most likely with the watering can shading you have given the roots are near the surface. We are glad to hear you report so favourably of Rhododendrons so near the city, and we hope your plants will continue to prosper. We should certainly prefer digging in sand rather than short grass, especially after the latter had lain so long as to become little else than useless litter.

SEEDLING VERBENA AND TROPÆOLIUM (G. C.).—Your Verbena appears to be quite novel in colour among the striped section of this flower and is a very pretty variety. It would form a nice contrast with *Striata perfecta*, but we can tell nothing of its value unless we are informed of its habits. It is very hazardous to decide on the merits of a Verbena from two or three perishing trusses. Send up a plant to the Floral Committee. The flowers of the *Tropæolum* were quite shrivelled, but judging from the faded flowers the colour did not seem new. The only way to discover its merits would be by seeing a plant under good cultivation.

WIRE EDGING FOR BEDS (Sacerdos).—We think wire edgings no ornament to beds on grass, for they are there without a meaning, and serve no purpose beyond that of making the flowers appear as if confined in a cage. The effect, however, is good if the wire be covered with some creeping plant, as Gold or Silver Variegated Ivies, or Ivy-leaved Geraniums, and the bed itself filled with bedding plants. The following are examples of such an arrangement:—Wire edging, *Cineraria maritima*, *Lobelia speciosa* planted inside it, forming a ring round a centre of Scarlet Geraniums; or *Tropæolum elegans* might be trained over the wire, then a ring of *Cineraria* round a centre of *Perilla*. Other arrangements might consist of *Cerastium Biebersteinii* on the wire, then Scarlet Geranium, and a centre of Yellow *Calceolaria*; or you might have Gold Variegated Ivy on the wire, then a ring of *Cineraria*, and a centre of *Lobelia*; or Silver Variegated Ivy on the wire, and a bed of *Calceolarias*, Geraniums, or other bedding plants, not being those with silvery foliage. Again, *Lonicera brachypoda variegata*, *Mikania scandens*, *Cobaea scandens* *foliis variegatis*, *Maurandia alba* and *Barclayana*, *Antirrhinum linariifolium*, *Nierembergia gracilis*, *N. intermedia*, *Verbena* (sorts) *Linaria cymbalaria*, *Lysimachia nummularia*, *Petunias*, and *Nasturtiums*, are all well adapted for covering the wirework, and you may then fill the basket with any kind of plant that will contrast with the edging plant. We are not in a position to express an opinion on the plants you name as having handsome foliage for the flower garden. By-and-by we shall take up the subject and give a list of the plants with the most effective foliage for the decoration of the flower garden. An account of this Birmingham Rose Show appeared in No. 172, page 27.

HOLLY HEDGE UNDERSTRIPPY (C. C. S.).—Give the hedge copious supplies of water in dry weather, mulch the surface with a couple of inches of littery dung, such as is employed for making Mushroom-beds, and water freely if dry weather continue, so that the nutritive constituents of the manure may be carried down to the roots. In April dig in the manure, and place some fresh mulching on both sides of the hedge to a distance of 18 inches. In May cut it down to 18 inches high, and trim the sides proportionately. It should push freely by July, and make a nice green hedge by autumn; if not, root it up and replant in April, taking care to place some nice rich compost around the plants to give them a start. We transplanted some large Variegated Hollies, some of them nearly 20 feet high, last April, and left the tops on until June, when we cut in the heads, the trees at the time shedding their leaves; now we are to be rewarded by some bushes of pyramidal form with fresh foliage, for the shoots are clustering on the old naked stems, and are already upwards of 6 inches long.

EXTRA CROWNS ON PINE APPLES (Rara avis).—There is nothing uncommon in the facts you state. It is one of the drawbacks as respects the *Evville*, and is often produced by water lodging in the heart of the plant when the fruit begins to show. Some gardeners remove carefully the most of the crowns, others just let them alone. In general the fruit looks best when there is only one crown, and that one of moderate size.

SEEDLING PELARAGONIUM (Cambrian).—It had shed its petals, but judging of its merits from a bud opened in water, we should say it would prove a useful decorative plant; the colour is bright and lively, with average truss. But it is desirable that a plant should be seen before any decision can be made as to its merits.

BOXES FOR EXHIBITIVE FLOWERS (Shurt).—We have not seen boxes answering your description. Stands are made in which flowers can be placed and then run in like drawers into a case, but the case forms no part of the exhibition-box.

SEEDLING PANSIES (L. F. F.).—They are good border flowers, but only one is sufficiently distinct from others already in cultivation to merit distinction. That one is one of the three "Pansies." It has two plum-coloured upper petals, and the other petals purple.

GREENHOUSE TO SUPPLY A CONSERVATORY (S. B.).—See the Manual on "Heating, &c." You give us too few data to enable us to advise you as we would wish to do. We are in doubt whether the contemplated 14-feet-wide house, and 40 feet in length, is to be a lean-to or a span-roof. If the latter, all the ashes might be fixed, and the ventilators be placed in the side walls, and at the apex of the roof. With a span-roof, side walls of from 3½ to 4 feet in height, and the height of the apex from 7 to 8 feet, would give a very serviceable house, and you could have a sparred platform on each side, or an earth bed, covered with rough slinders, for setting the plants on. The latter would be the most economical. The first plan would enable you to keep many things at rest on the ground beneath your platform. For a lean-to house of that width, the back wall would require to be from 8 to 9 feet, and the front wall from 3 to 4 feet. The s; an or hipped-roof would be the best. Then as to having this 40 feet in two divisions, and the one to be much hotter than the other, this would be best done with hot water. You might then also have bottom heat for your beds in one department. The simplest plan of heating such a house, if you can sink your stove-hole low enough, would be by means of a flue beneath the pathway thus—make the end next the stove-hole the warmest end; make a flue and return beneath the pathway, so that you can heat that part separate by itself; continue the flue in the other house, but shut out by means of dampers, the regulating of which will enable you to heat or not heat at will, and less or more, as you think fit, the other 20 feet. This will make your flue altogether 80 feet long before it enters the chimney. A better plan, perhaps, would be to have a chimney at the furnace for the first house, or rather division of 20 feet, and then merely a single flue for the second, and a second chimney at the other end. With a damper to shut off the connection there will be no difficulty. If in the forty-foot length the main flue rises 6 inches or more, the draught will be good. Your proposed plan of roofing theinery will give you more room inside than a mere sloping lean-to roof. Would it not be a good thing to decide at once on the houses you meant to have, and then have one boiler to heat them all? A flue or a stove we consider the most economical as respects small detached houses, but hot water will be best when several houses are to be heated, as there will be waste from only one chimney.

CURRANTS (W. Newman, Harington).—Your Red Currants are certainly very fine; they are the Red Grapes.

SOWING FEVERFEW (Inquirer).—You may sow the seeds of Feverfew any time from now to the beginning of September; but if you wish certainty of results, it will be much better to propagate a favourite kind by cuttings in September.

GLASS FOR ORCHARD-HOUSE (Subscriber, J. G.).—For 31 oz. glass we would decidedly have only 17 inches between rafter and rafter. The squares would thus be 17 inches by 12 or 13, we would prefer 12 inches. This gives more strength to the glass than if the squares were longer than 12 inches, as each lap gives additional strength. We should like the rafters to be 4½ inches deep, by 1½ inch across. 4 inches deep would do if the roof was a steep span, but if at all flat, 4½ inches will be needed. Your proposed glass will answer admirably. You will have abundance of light with glass of 17 or even 16 inches across, and will need a fair amount of air-openings.

STOVE FOR A GREENHOUSE (Miss K.).—If you would tell us how much glass there is on the garden-house, we should be more able to advise. At present we have no doubt that a moveable iron stove would be best, as, probably it would not be needed at all from May to the end of October. A stove, round or square, from 24 to 30 inches in height, and 15 inches square or in diameter, with a flat top, would answer admirably. On the top an iron vessel may be placed for holding water, and supplied with a lid so that you need not have too much moisture in winter. We should like it as wide as we say—as the next best substitute for double sides—as the fire-place of 8 inches square could be thus 3 inches from the outside. The great evil of a smaller stove would be that the sides at the fire would get too hot, and burn the air.

GRAPE BLITCHED (T. L. E.).—Without seeing the blighted berries, we can only come to the conclusion that they have been burned or scalded, very likely from the extreme heat, and air not given early enough. If nothing of the kind happened before, we should think this may be the cause. If it happened before, then most likely there are rough spots on the glass that concentrate the sun's rays like a burning glass, and these you must daub with a little paint. You have done right in dulling the glass, but do not overdo it. The berries thus touched will not do much good, but those untouched will be all right, if these measures, and plenty of air given early, are attended to. Very likely, however, the berries may suffer from some other cause, we suspect the disease called "the spot."

NAMES OF INSECTS (V. G. C.).—The Ivy shoots are infested with a species of aphid which is of rare occurrence on that plant. The shoots should be well syringed with Gishurst compound.—W.

NAMES OF PLANTS (W. L., Reading).—There was no No. 1 in your letter; No. 2 is *Lyonia paniculata*, DC. (*Hortus*).—1, *Circæa alpina*, L.; 2, *Claytonia alsinoides*, Sims. (*C. R., Leeds*).—*Solanum dulcamara* or Bittersweet. (*A Subscriber*).—The Fern numbered 1.111 is *Lastrea Filix-mas v. cristata*, originally found in Cornwall.

POULTRY, BEE, and HOUSEHOLD CHRONICLE

JUDGES AT THE APPROACHING ISLINGTON POULTRY SHOW.

AFTER some hesitation I have resolved to reply to your correspondent "AN EXHIBITOR." I am, however, somewhat at a loss to understand his object. As to the first portion of his letter, had he been a member of the Poultry Club he would have found many of his queries unnecessary, as Mr.

Tudman, the Honorary Secretary, submitted the proposed Judges to the Stewards for approval.

If this exhibitor knew anything about the correspondence concerning Mr. Hewitt being a Judge for the Poultry Club he would clearly see that that gentleman has not been appointed. Mr. Tudman is not aware of any quarrel having taken place; and how your correspondent can state that the rules of the Club have been sacrificed or broken down I cannot conceive, for as yet they have been little acted upon, the test being to come.

With regard to making known the names of Judges, there are, I think, very grave objections against doing so, if only affording dishonest exhibitors the means of communicating with them. The three Judges selected by the Club are certainly not exhibitors now. The Islington Show, as your correspondent may see, is under the control and management of the Poultry Club, and why should the Club give up the selection of Judges to the Manager (as suggested) when they can find men, who are members of the Club, so highly qualified to fill the office? To do this would certainly be admitting incapacity and weakness, which, as yet, they assuredly do not. From what has come under my knowledge I feel confident your correspondent is expressing the opinion of himself only, and not of exhibitors generally, which, I believe, the forthcoming Show will demonstrate.

Allow me finally to state that the worthy Honorary Secretaries of the Poultry Club are gentlemen acting and giving their services for the benefit of the poultry-loving community, and these are purely honorary. I therefore beg to state that those for whom they act so disinterestedly must bear in mind the object they have in view; and, although placing themselves open to correction, they are not, at the same time, public property, nor paid servants, who can at any time be reprimanded or dismissed for not carrying out the views and ideas of every little exhibitor who chooses to attack them.—A POULTRY FANCIER.

NEWCASTLE-ON-TYNE POULTRY EXHIBITION.

We were informed on the spot, that not since the years 1858 or 1859 has there been a show of poultry held at Newcastle-on-Tyne. A few amateurs, however, considering that the holding of the Royal Agricultural Society's Meeting at Newcastle would afford an excellent opportunity for reviving this meeting, determined on the attempt, and it gives us great pleasure to state that a very excellent show of both Poultry and Pigeons resulted. The visitors to the Royal Agricultural Show had, in their progress to the Show-yard, to actually pass the Newcastle Hay Market, in which a very spacious tent was erected for the Poultry Show, and the consequence was that these holiday-seekers attended in numbers that few could credit, save those who witnessed it. The fact is, so numerously attended a meeting is the exception rather than the rule of such exhibitions, and we can therefore heartily congratulate the promoters of this Show on the issue.

As to the general appointments, it is simply just to say that everything that could possibly be done was done for the comfort of the valuable stock placed under the care of the Newcastle Committee. The weather was decidedly the hottest of this year, and fresh cut lettuce were placed daily in each pen, a comfort that was evidently most highly appreciated by the specimens exhibited. The tent provided was indeed an excellent one, and spacious enough to satisfy the most anxious owners. The weather, however, was so sultry, that the suggestion was strongly forced on the minds of most parties present that such tents require a more perfect ventilation than is at present provided. Experience proves that it is not from beneath that a fresh current of air is required, but that an outlet should be provided for the heated atmosphere arising from so great a number of visitors, themselves in a state of excessive perspiration in almost every instance, even before entering, and consequently feeling but little relief, even though the canvass of the tent might afford a certain amount of shade from the burning sunshine out of doors. We cannot but believe this difficulty might be easily remedied by the manufacturers of such "pavilions," if at the ridge-pole certain apertures of sufficient size were introduced,

capable of letting away the impure air as it arises from below. We give the suggestion hoping it may receive the consideration of tent-makers generally, as their practical experience will quickly apply some remedy, by which sudden rain might be as effectually provided against as ever, though proper ventilation might yet be quite unimpeded.

In Spanish, Mr. Teebay, of Preston, stood first, with a most capital pen, but, as we anticipated, not so good in condition (from moulting) as we could have wished for. Mr. Rodbard's second-prize pen contained the best pair of Spanish hens in the Show, but the cock was not their equal. The class was good. In *Dorkings*, excepting the prize birds the competition was not so good as we hoped for, though the winners were capital. The absence of Viscountess Holmesdale's birds (though entered) was a matter of regret to every one, as these north-countrymen pithily observed, "We have heard so much of her ladyship's birds, and that renders our disappointment only the greater." The *Cochins* were first-rate; Messrs. Bishop, Bates, Shortrose, and others, vying with our greatest meetings as to their respective merits in the pens competing. Those who did not happen to be present here missed a great treat. The *Brahmas*, too, were capital throughout, large entries. In this variety, Mr. Boyle, of Poyer Park, Dundrum, Ireland, left all competition far in the rear with three pens of *Brahmas*, that, it will be seen by the prize list, left no premium to his rivals. In *Hamburgs*, the Spangled ones were the best classes of both colours, nor do we expect better. The *Polands* were also very good. The pen exhibited at Thorne a few weeks back, and there disqualified, of Black *Polands*, here again put in an appearance; but as, here at Newcastle, the legs were shown naturally, and the tail of the cock only bore the inevitable remnants of the dye from the Thorne Meeting, they were now only passed by without any publicly assigned reason. The *Game* classes were weak in numbers, and, excepting the prize birds, were not equal to general expectations.

The customary classes for *Ducks*, *Geese*, *Turkeys*, and *Rantams*, were amply filled with first-rate specimens. We noticed a very nice pen of *Sheldrakes*, that seemed quite to be public favourites.

The show of *Pigeons* embraced the best specimens of our first-class breeders, and resulted in a very numerous entry, scarcely was there an empty pen throughout this section of the Exhibition.

SPANISH.—First, R. Teebay, Preston. Second, J. R. Rodbard, Bristol. Third, W. Bruce, Perth. Commended, E. Craddock, Newcastle; J. Redpath, jun., Edinburgh.

DORKINGS.—First and Second, Mrs. F. Blair, Perthshire. Third, Sir G. Gore, Bart., Hopton Hall. Highly Commended, W. Gamon, Thornton-le-Moor; M. Hunter, Green Hammerton Hall. Commended, H. M. Bishop, Nottingham; J. K. Fowler, Aylesbury.

COCHIN-CHINA (Cinnamon or Buff).—First and Second, C. T. Bishop, Lenton. Third, Mrs. F. Blair, Perthshire. Highly Commended, A. A. Smith, Landport. Commended, J. Stephens, Wakefield; E. Yardley, Sheffield.

COCHIN-CHINA (Partridge or Grouse).—First, H. Bates, Birmingham. Second, J. R. Rodbard, Bristol. Third, T. Stretch, Ormalkirk. Commended, E. Smith, Middleton.

COCHIN-CHINA (White).—First, Mrs. F. Blair, Perthshire. Second, W. Dawson, Hopton Mirfield. Third, D. Casner, Erdington.

BRAHMA POOTRA.—First, Second, and Third, R. W. Boyle, Poyer Park, Dublin. Highly Commended, Mrs. F. Blair, Perthshire.

GAME (Black-breasted and other Reds).—First, Sir G. Gore, Bart., Hopton Hall. Second, H. Adams, Beverley. Third, G. W. Binn, Darlington. Highly Commended, Sir G. Gore, Bart.

GAME (Any variety).—First, J. B. Chune, Coalbrookdale. Second, H. Adams, Beverley. Third, Sir G. Gore, Hopton Hall.

HAMBURGH (Golden-pencilled).—First, C. Pease, Darlington. Second, T. Smith, Northwram. Third, T. Birch, Sheffield. Commended, H. Beldon, Gilstead, Yorkshire.

HAMBURGH (Silver-pencilled).—First, E. Yardley, Sheffield. Second, H. Beldon, Gilstead. Third, J. Leary, Rothbury.

HAMBURGH (Golden-spangled).—First, W. Cooper, Helmsley. Second, T. Birch, Sheffield. Third, H. Beldon, Gilstead. Commended, E. Barrett, Kirkwhelpington; Sir G. Gore, Bart., Hopton Hall; S. H. Hyde, Taunton Hall.

HAMBURGH (Silver-spangled).—First, H. Beldon, Gilstead. Second, Sir G. Gore, Bart., Hopton Hall. Third, C. Pease, Darlington. Highly Commended, J. Robinson, Vale House, Garstang.

POLAND (Gold or Silver-spangled).—First and Third, H. Beldon, Gilstead. Second, C. Pease, Darlington.

POLAND (Any other variety).—First and Second, H. Beldon, Gilstead. Third, Mrs. F. Blair, Perthshire.

ANY VARIETY (not named above).—First, Mrs. F. Blair (La Fleche). Second and Third, C. Pease (Silkies and Black Hamburgs). Commended, H. Beldon.

CHICKENS.

SPANISH.—First, J. R. Rodbard, Bristol. Second, E. Brown, Sheffield. Third, W. Massey, Gedney.

DORKING (Coloured).—First, Mrs. F. Blair, Perthshire. Second, Rev. J. G. A. Baker, Biggleswade, Beds. Third, H. Beldon, Singley. Highly Commended, R. W. Boyle, Poyer Park, Dublin; J. White, Walsby, Yorkshire; Mrs.

Seamons, Hartwell, Bucks; Rev. J. F. Newton, Kirby-in-Cleveland. Commended, J. Robinson, Vale House, Garstang.

COCHIN-CHINA (Cinnamon or Buff).—First and Third, J. Shorthose, Newcastle. Second, T. Stretch, Ormskirk. Highly Commended, T. H. Baker, Haringham; J. Shorthose.

COCHIN-CHINA (Partridge or Grouse).—First, S. Robson, Brotherton. Second, T. Stretch, Ormskirk. Third, P. Cartwright, Oswestry.

GAMES (Any colour).—First, W. T. Everard, Barton Hill House, Leicester. Second, H. Thompson, Old Hutton, Westmoreland. Third, A. B. Dyas, Madeley. Highly Commended, T. Clemmensen, Darlington.

ANY VARIETY (not named above).—First, H. Beldon, Gilstead. Second, H. S. Stobart, Witton (White Cochins). Third, G. Brooks, Huddersfield (Golden-spangled Hamburgs). Commended, Mrs. Seamons, Hartwell, Bucks (Brahma Pootra); J. Wright, Woodbridge.

DUCKS (Aylesbury).—First and Second, Mrs. Seamons, Hartwell, Bucks. Highly Commended, O. A. Young, Driffild. Commended, J. Robinson, Vale House, Garstang.

DUCKS (Bouen).—First, J. K. Fowler, Aylesbury. Second, Mrs. F. Blair, Perthshire. Highly Commended, J. Robinson, Vale House, Garstang.

DUCKS (Any variety).—First, C. Pease, Darlington. Second, J. E. Jessop, Hull. Highly Commended, J. G. Milner, Leyburn.

GREENS (Any colour).—First, Mrs. Seamons, Hartwell, Bucks. Second, Mrs. F. Blair, Perthshire. Highly Commended, Mrs. F. Blair. Commended, J. K. Fowler, Aylesbury.

TURKEYS (Any colour).—First, Mrs. F. Blair, Perthshire. Second, C. Pease, Darlington. Highly Commended, J. Wilson, Woodhorn; J. K. Fowler.

TURKEY COCKS.—Prize, Mrs. F. Blair, Perthshire.

BANTAMS (Game).—First, C. W. Wilson, High Park, Kendal (Pile Game). Second, R. M. Stark, Hull. Highly Commended, G. Malpas, jun., Liverpool. Commended, H. Bates, Birmingham; J. Crossland, Wakefield.

BANTAMS (Gold or Silver-laced).—First, H. Beldon. Second, F. L. Roy, Northorn. Commended, R. Adams, Birmingham; E. Stark, Hull.

BANTAMS (Any variety).—First, H. Beldon, Gilstead, Yorkshire. Second, withheld.

SINGLE COCKS.

GAME.—First, Sir G. Gore, Bart., Hopton Hall. Second, H. M. Julian, Hull. Third, Sir G. Gore, Bart. Highly Commended, J. B. Chune, Coalbrookdale.

BANTAMS (Game).—First, G. Malpas, jun. Second, R. M. Stark. Third, E. Swift, Southwell.

SPARKING.—First, H. Beldon, Gilstead, Yorkshire. Second, W. Massey, Gedney, Lincoln.

DORCHES.—First, Rev. J. F. Newton, Kirby-in-Cleveland. Second, Rev. J. G. A. Baker, Biggleswade, Beds. Commended, Mrs. F. Blair, Perthshire.

COCHIN-CHINA (Cinnamon or Buff).—First, Mrs. White, Broomhall Park. Second, R. Adams, Birmingham. Highly Commended, C. T. Bishop, Lenton; F. Dickens; T. H. Barker. Commended, C. Kershaw, Ashton-under-Lyne.

COCHIN-CHINA (Partridge or Grouse).—First, R. Adams. Second, R. White.

BRABMA-POOTRA.—First, H. Lucy, Hedden Bridge. Second, Captain Potter, North Shields. Commended, J. Wright, Woodbridge.

POULTRY SELLING CLASS (Any breed).—First, E. Brown. Second, G. W. Binn, Darlington. Third, G. Brooks, Huddersfield. Highly Commended, J. White; W. Massey (Bantams). Commended, G. Cruddace (Cochins); F. L. Roy.

PIGEONS.

CARRIERS (Any colour).—Cock.—First, F. Elze, Baywater. Second, W. B. Van Haansbergen. Commended, H. Yardley, Birmingham. Hen.—First, F. Elze. Second, H. Beldon, Gilstead, Yorkshire. Commended, W. B. Van Haansbergen, Benwell.

POULTRY (Any colour).—Cock.—First, W. Ashworth, Owlington. Second, W. Massey, Gedney. Hen.—First and Second, G. E. Potts, Sunderland. Commended, M. E. Jobling, Barras Bridge.

BARRAS (Any colour).—Cock.—First, W. B. Van Haansbergen. Second, H. Beldon. Hen.—First and Second, W. B. Van Haansbergen.

TUMBLERS (Short-faced).—First, G. R. Potts, Sunderland. Second, H. Beldon. Commended, H. Yardley, Birmingham.

TUMBLERS (Common).—First and Second, M. E. Jobling, Barras Bridge.

TUMBLERS (Any colour).—First, H. Beldon. Second, W. B. Van Haansbergen.

PANTAILS (Any colour).—First, F. Elze. Second, H. Yardley. Highly Commended, M. E. Jobling. Commended, H. Yardley.

JACOBIANS (Any colour).—First, M. E. Jobling. Second, W. Veitch, jun., Jedburgh.

OWLS (Any colour).—First and Second, G. Byers, Seaton Sluice. Highly Commended, M. E. Jobling.

TURBOTS (Any colour).—First and Second, M. E. Jobling. Highly Commended, F. Key, Beverley; T. C. Taylor, Middlesborough.

NUES (Any colour).—First, W. Johnson, Carlisle. Second, F. Key, Beverley.

MAGPIES (Any colour).—First, M. E. Jobling. Second, F. Elze. Highly Commended, M. E. Jobling.

ANY VARIETY NOT NAMED BEFORE.—First, M. Smushall, Gedney. Second, M. E. Jobling. Highly Commended, M. E. Jobling.

PIGEON SELLING CLASS (Any variety).—First, J. B. Chune, Coalbrookdale (Jacobins). Second, H. Smushall, Gedney. Third, M. E. Jobling (Magpies).

EXTRA PRIZES.—A Silver Medal, presented by M. E. Jobling, Esq., for the best pair of Barbs.—W. B. Van Haansbergen. A Silver Medal, presented by J. Van Haansbergen, Esq., for the best pair of Blue Owls.—M. E. Jobling. A Silver Cup, given by Lord Deedes, to the most successful exhibitor in the poultry classes.—H. Beldon, Gilstead, Yorkshire. Silver Cup for the best pen of Chickens.—J. R. Rodbard, Bristol. Gold Medal, given to the most successful exhibitor in the Pigeon class.—M. E. Jobling.

Edward Hewitt, Esq., of Sparkbrook, Birmingham, officiated for the Poultry; and T. W. Botcherley, Esq., of Darlington, awarded the prizes in the Pigeon classes.

RULES FOR JUDGING POULTRY.

I HAVE never seen the rules of the Poultry Club, and do not belong to it. In fact, a reply which I received to an application I some time since made to the Secretary on the subject, led me to believe that no new members were desired. I am, consequently, not an advocate of their rules, and, indeed, know nothing about them. I say this much, so that I may not be thought an interested party in this discussion.

It would, I admit, be absurd to make rules as to non-essentials; but do I correctly infer that you are, therefore, of opinion that it would be absurd to have rules as to essentials? If I do, I must say with all deference to you, Messrs. Editors, that I cannot see the common sense or logic of your conclusion. At present it is manifest that there is considerable difference of opinion amongst judges as to what is and what is not essential, and hence the conflicting decisions as to the merits of pens of poultry shown at different shows, and judged by different persons.

We all know, for it is notorious, that a pen placed first at one show will, often, without any apparent reason other than difference of opinion in the judges, have to give way to a pen which it had before beaten, and, perchance, be unnoticed altogether.

Bearing this fact in mind, I cannot help believing that amateurs would gladly have some standard rules which should guide them in breeding their fowls, and the judges when judging them. Of course, a great deal must always depend on the judges; for instance, where there is uneven matching in size, &c., or where some pens are shown in better condition than others; but I am quite unable to understand how any judge's labours as to these points can be enhanced by certain and intelligible rules on essential points being reduced to writing. If such were generally acted on by them and by breeders, I cannot divest myself of the notion that not only would exhibitors generally be more satisfied with awards, but that really competent judges would find their labours more easy and agreeable than at present.

I hope I shall not be understood as insisting that rules of any kind will, or can, make every man a good and efficient judge; I believe nothing of the kind. To be a thorough judge requires peculiar and rare qualities, besides considerable experience, and lacking these no man with the most minute directions would ever make a judge whose decisions would give the poultry-loving public satisfaction.—P.

[It seems to us that there is no difference of opinion between our correspondent and ourselves. The essential characteristics of the varieties are well known, and we never knew a judge of poultry disregard them. If it be thought desirable to have them printed there can be no objection. When a pen takes a prize at one show, and is not noticed at another, it only intimates that their competitors in the opinion of the judge, had a preponderating amount of non-essential excellences.]

BEES IN PERTHSHIRE.

I HAPPEN to reside in the centre of Perthshire on the banks of the "majestic Tay," in one of the most picturesque spots in the country. I am surrounded on all sides by hills covered with extensive forests, or clad with the purple heather. The hazel, the willow, the alder, the beech, the plane, the oak, the mountain ash, the hawthorn, and the holly, in point of blossom, I have in no former season seen surpassed. These trees afford rich pasture for bees. The broom, the furze, and the blackberry are also abundant. There is in general a deficiency of white clover in this district, the soil or the climate not being suitable to its continued existence. It flourishes for a year or two and then becomes extinct. The white clover affords the richest pasture to the bee, and where the plant is abundant and luxuriant the bees prefer it to any other flower. The lime trees are also numerous here, but they are not yet in flower. The bees are particularly fond of the lime, and when a genial south-west wind blows they collect enormous masses of honey from its myriads of sweet-smelling blossoms. The heath is also abundant, covering with its purple blossoms many a square mile of surface. It does not flower until the beginning of August.

With regard to the character of the weather, in the early part of the season it was very cold and unfavourable. Many

of the country people, however, do not consider such weather unpropitious to bees, especially if it terminate by the middle of April. The latter part of April and the month of May were very favourable, and during these months most of my stock-hives made great progress, and increased much in population. The temperature was so high during the latter part of May that large masses of bees hung in clusters and festoons about the entrances and underneath the stools of the hives, and several hives in the district swarmed. There was one swarm so early as the 15th of May—an unusual occurrence in this locality. The last ten days have been very unpropitious. Many hives that were preparing to swarm were arrested in their progress, the bees destroying the drones in their larva and pupa conditions, and tearing down the royal cells that were in course of construction.

The great obstacle to the prosperity of bees in this quarter is the state of the weather, and so much has this been the case during my experience, which extends to more than a quarter of a century, that I have sometimes thought the climate entirely unsuited to such insects. During the last three or four years the seasons have been especially unpropitious, and as a natural consequence thousands of hives have perished, and many apiaries have gone to ruin.

I have at present four apiaries consisting of nineteen hives, and with the exception of two all in common straw hives. The first apiary is in a back area adjoining my dwelling-house. It consists of two hives—one a foundling, which I had literally dug out of the roof of a house to which it had migrated last season, and which I had transferred to a Huber-hive, and the other the swarm that had taken possession of the glass hive in my attic window, and to which I alluded in a former communication. These two hives are rapidly progressing in strength, but they are "far behind" for the season. The population of the foundling may average 10,000, and that of the glass hive 5000 or 6000. No drones have yet (June 10th) appeared. This apiary is so surrounded with tall lime trees, and high gables of houses, that the bees have often difficulty in surmounting them, having to mount up a spiral of 40 or 50 feet in height. Any natural swarm coming off in this apiary is generally lost.

In the second apiary I have only one hive. It is in good condition, and may swarm in about a week. My third apiary is situated in a distant forest, in the midst a young oak coppice; the disadvantage of this apiary lies in its distance from immediate observation. The bees, however, are most vigorous, healthy, and prosperous. Their peculiar hum as they depart from and return to their hives is very pleasing. This apiary consists of four hives, three young hives and one old hive. The old hive is unusually strong in bees, and at present is lying out in masses on the stool. Drones have appeared in all the hives, and they are in good condition. No swarms have yet been sent forth. Though, perhaps, it would be for my interest to make artificial swarms, I have such a desire to witness the egress of natural swarms that I have as yet delayed forming any. One of the four is an artificial swarm of last year, which had only half filled its hive with comb; but by this time it must have brought it down to the surface.

The fourth apiary consists of twelve stocks domiciled in straw hives; eight of these are young swarms of last year, and four old stock-hives. Nine are in first-rate condition, lying out in masses, and abounding in drones. The cause of the bees in so many hives clustering in such masses on the board lies in the circumstance of their having been arrested by the cold weather in the process of constructing royal cells, and having no royal cells sealed the old queen is unwilling to emigrate.

In closing this article can any apiarian inform me whether he has ever known a swarm emigrate without a royal cell sealed, or in process of being sealed, in the old stock?—*PHILIPUS, Dunkeld.*

WORRIED TO DEATH.

On the 14th inst. I missed the young queen of a small artificial swarm. After a long and unavailing scrutiny of every comb, I at length bethought me of examining the ground in front of the hive, and there I found the body of the unfortunate queen. Its peculiar appearance at once satisfied me that she had been pinioned and literally worried

to death by her own workers; and although I failed in detecting the usual sign of impregnation, I more than suspected that the maltreatment to which she had fallen a victim had closely followed her return from a successful wedding trip. Three days afterwards I found these suspicions verified in the case of a very beautiful young queen of another small artificial swarm, whose lifeless body I extricated from a dense cluster of workers within the hive, the sign of impregnation in this case remaining distinctly visible.

Can any one suggest a reason for these singular aberrations in the instincts of bees, dooming the community in each instance to certain extinction by the destruction of its juvenile sovereign at the very moment when she had become fully capable of fulfilling her important functions?—*A DEVONSHIRE BEE-KEEPER.*

NATURAL AND ARTIFICIAL SWARMS.

PERHAPS the result of my driving operations condemned in your Journal of the 28th ult., may not prove uninteresting. On July 1st, and the three following nights, piping was heard in the old stock. On July 5th a fair-sized swarm issued, and settled so quickly in a neighbour's orchard that had I been absent for fifteen minutes it might have been lost to me. Might I have driven again, or could I have done anything to prevent the swarming? In the afternoon the old stock expelled dead two young queens. I have, therefore, had from one stock, first, a natural swarm, which sent out a maiden swarm (a very large one) on July 10th; next, two artificial swarms (both doing well); lastly, a natural swarm.—*A VILLAGE DOCTOR.*

[You certainly ran great risk in your operations, but good luck has pulled you through. Young queens do not on the average lay eggs until they are fourteen days old, but the one you saw on the 25th of May, must have left brood behind, although but twelve days old at the time she quitted the old stock. You could not have prevented the swarm which issued on the 5th of July.]

BEEES IN SUPERS.

OVER one of my hives, a common straw one with flat board at the top, in which there is a circular hole, I have placed a bell-glass. The bees congregate there in numbers, but show no signs of building or forming the comb. Ought I to have attached a small piece at the top (inside) as an inducement? or will they do it of their own accord when the hive is filled. I am quite a beginner in the apiarian line, having bought two stocks only last autumn. One died during the winter; the other threw out two swarms in May and June, which I put into these new hives, made in the village, and have now placed the bell-glasses over. I placed the bell-glasses over because the bees hung out so much, and I was afraid they would swarm, which (the people say here), in July is not worth a butterfly. They only look at and visit the extension of their new homes, but will not build. I ought to say the glasses are rather large—9 or 10 inches in diameter. Is the extent of their new apartments too large, or what is the reason? I have placed an empty hive over the glasses, so that they are in darkness.

Supposing they do form the combs and fill the glasses with honey, how am I to take the glasses off so as to get the contents without injuring the bees, and when is the proper time for doing so?—*RECTOR, Kent.*

[If the bees remain in the bell-glasses they will probably form combs therein, but would have done so more readily if some clean comb had been fixed in them beforehand. The glasses should be taken off when filled, or when the honey season is over. Full directions for removing supers are given in page 125 of the sixth edition of Taylor's "Bee-keeper's Manual."]

OUR LETTER BOX.

APIARIAN REQUISITES—SUPERING STOCKS (*Château Vallon*).—*Messrs. Neighbour & Son* supply bell-glasses and caps, and in their advertisement, which appears in another column, you will find a list of agents, but none we fear in Yorkshire. Can any of our readers say where apiarian requisites are sold in that county? Caps or supers may be used with advantage as long as the honey harvest continues, and if there be much heath near you, may even now be of service.

WEEKLY CALENDAR.

Day of Month.	Day of Week.	AUGUST 2—8, 1864.	Average Temperature near London.			Rain in last 37 years.	Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock before Sun.	Day of Year.
			Day.	Night.	Mean.	Days.	m. h.	m. h.	m. h.	m. h.		m. s.	
3	Tu	Mugwort flowers.	73.9	52.1	64.0	28	27 44	45 47	32 4	9 7	●	5 57	215
4	W	Common Bent Grass ripe.	74.7	51.1	62.9	19	29 4	43 7	36 5	33 7	1	5 52	216
5	Th	Honeysuckle berries ripe.	75.6	51.2	63.4	16	30 4	41 7	38 6	54 7	2	5 47	217
6	F	Yellow Scurvy flowers.	73.9	51.2	62.6	17	32 4	40 7	41 7	16 8	3	5 41	218
7	S	PANCON ALWARD BORN, 1844.	72.7	50.9	61.8	27	33 4	38 7	48 8	37 8	4	5 35	219
8	Sun	11 SUNDAY AFTER TRINITY.	74.7	50.5	62.6	13	35 4	36 7	50 9	57 8	5	5 28	220
	M	Saintfoin flowers.	74.8	49.7	62.0	16	36 4	34 7	54 10	21 9	6	5 21	221

From observations taken near London during the last thirty-seven years, the average day temperature of the week is 74.5°, and its night temperature 50.9°. The greatest heat was 92° on the 2nd, 1856; and the lowest cold, 37°, on the 6th, 7th, and 8th, 1851. The greatest fall of rain was 1.03 inch.

HARDY BEDDING PLANTS.



HERE ought to be gardens for all the months of the year, in which, severally, things of beauty may be had in season." This is Lord Bacon's ideal of a perfect garden in the seventeenth century. At this time embroidered gardens had been introduced from France, and though not adverse to art being employed to produce harmony of form and colour by the panel-work and its embroidery, he was evidently of opinion that this form of garden was not what a lover of Nature could be satisfied with.

In the present day, embroidered gardens, and polychrome or parti-coloured figures have been introduced, and I have seen them at many places, the flowers in summer being skilfully arranged in geometrical beds, ribands, compartments, or scrolls, separated from each other by narrow paths or alleys formed of permanent-coloured materials instead of gravel only, and the whole resembling a many-coloured carpet, in which the plants are trimmed or otherwise made to assume an appearance little differing from that presented by the dead colouring materials. I have also seen these gardens in winter, and found the coloured materials, which are the winter substitutes of flowers, not giving the effect produced by the glowing tints of life. In fact, in spring, autumn, and winter, these fancy gardens with their parti-coloured arrangements, and lively combinations of small toy-like shrubs do not give that appearance in winter which we were led to expect.

My impression of embroidered parterres is, that they cannot be pleasing to the real lover of Nature and art, for true art does not see anything more beautiful than Nature. The beauty of a picture consists in its near approach to nature, and the beauty of a garden, no matter how trim and well kept it may be, rests on each occupant presenting a natural appearance. When art is duly applied to Nature's works, their wildness and irregularity only are rectified.

My notion of a garden, no matter how limited or extensive the area may be, is, that it should be ornamental at all seasons. To make it so, fair selections should be made—1st, of evergreen, flowering, and deciduous trees and shrubs; 2nd, of plants flowering or otherwise attaining their greatest beauty at different periods of the year; 3rd, and the whole should be arranged so as to form a beautiful picture in spring, summer, autumn, and winter. We should not then see every inch of available surface occupied by plants yielding a mere monotonous blaze of colour for three months out of the twelve.

Having made these preliminary remarks, I may now state my impressions as to the present system of arranging plants in beds, in order that I may be the better understood. 1st. I think the system of massing plants the most natural of all, for in nature plants are distributed

in groups, yellow here, red there, white or blue elsewhere. 2nd. That for producing an effect, and making the most of some plants that appear diminutive when placed singly, that system is unequalled. 3rd. That masses judiciously introduced without taking up the ground required for other plants, give a feature to a garden not otherwise to be obtained. 4th. That when all the contrivances, and most of the labour and means of a place are devoted to bedding plants, and when every nook and corner is filled with them, to the exclusion of other plants equally beautiful, though not tender, for the sake of a short brilliant display of bloom in summer, then is this system misapplied.

Now, for affording a fine display of bloom in summer, no plants are more suitable than those having a decided colouring, either of bloom or foliage, there being but one colour, pure, distinct, and bright; the habit must be dwarf and compact; the flowers of good substance, borne well above the foliage, but not so as to present an uneven surface; and the blooming must be profuse, and of three months' continuance. The plants, moreover, should be of good constitution, and capable of enduring wind, rain, and other peculiarities of the climate. These being the conditions of a good bedding plant, it is evident that those plants doing well in our climate without the aid of artificial protection in winter, are the most likely to withstand the changes of our climate; those requiring artificial protection in winter, or nearly at all seasons, being only employed as auxiliaries furnishing something in colour, form, or foliage not found in hardy plants. The day may be distant, but I believe it will come, when the horticulturist will be able to fill his beds with plants needing no more protection in winter than that of a cold frame, and be able to obtain an effect equal to that furnished by hardy and tender plants combined. This is a desideratum for which the hybridiser is striving, and the gardener longing; and employers will then have handsome winter-flowering plants at a dreary time of the year, in place of thousands of Geraniums, &c., that contribute nothing to the ornamentation of the structures, but entail a great amount of labour and expense.

Though the time has not yet arrived when we can substitute hardy plants for tender without destroying the splendour of the flower garden, I am persuaded that many hardy plants might now be employed, especially in places where the amount of glass is small, and that glass desirable for furnishing plants blooming in autumn, winter, and spring. We have so many fine hardy bedding plants, that I shall begin with them, though I ought to have taken shrubs first; and I am the more induced to do so from a clergyman having given me an account of the fine display of flowers which he keeps up without wintering a single bedding plant except Geraniums, as he employs hardy plants instead.

The merits of hardy plants are—they need little or no artificial protection, consequently the greenhouse is not turned into a repository for fading, drooping plants every autumn; and they require but little care one half the year. In their case no daily attention is needed to picking off dead leaves, watering, and giving air. They withstand

rain, heat, and cold, with the other vicissitudes of our climate, and can be grown by any person having ground, and a taste for gardening.

VARIEGATED HARDY BEDDING PLANTS.

BELLIS PERENNIS AUCUBÆFOLIA.—Perhaps the best of all golden variegated plants. It grows about 3 inches high, has bright scarlet flowers in early summer, and is second to no edging plant known. Division of the root.

FRAGARIA VARIEGATA (Variegated Strawberry).—Beautiful silver variegation. Grows about 6 inches high. Forms very pretty white panels, in borders, and is adapted for growing under trees if the spot is not too dry. Of easy culture, and adapted to all soils. Increased by runners.

IRIS GERMANICA VARIEGATA.—Height 1 to 1½ foot. White stripes along the sword-like leaves, which give it a fine appearance in a ribbon-border. Division of the root.

SHAMROCK (*Trifolium repens*).—Black and green leaves. Height 6 to 9 inches. A centre of *Achillea aurea*, a ring of *Shamrock* round it, and an edging of *Arabis caucasica* variegata, make a superb bed. Seed, division, and cuttings.

MELISSA VULGARIS VARIEGATA (Golden Variegated Balm).—Deep golden blotch. Height 1 foot. Liable to lose its variegation in rich soils in autumn. Good for small or medium-sized beds. Cuttings and division of the root.

SPIRÆA ULMARIA VARIEGATA (Variegated Meadow Sweet).—Very sweet, and beautiful when planted as the back row of a ribbon. Suckers and division.

ARABIS LUCIDA VARIEGATA.—As a dwarf bedding plant this is surpassed by none, and equalled by few. It is a first-rate plant for tessellated patterns, and margins of beds. Suckers or offsets. It is the *Arabis alpina* variegata of some gardens.

ARABIS ALBIDA VARIEGATA.—More free in habit than the preceding, and having white variegations. It is sometimes called *Arabis caucasica* variegata and *A. grandiflora* variegata. It is a charming edging plant to go next grass, and for filling-in angles, &c., in tessellated patterns. Division of the roots or cuttings.

ALYSSUM SAXATILE VARIEGATUM.—Much used in embroidered parterre patterns. It forms a lovely yellow bed in spring, and the foliage tells afterwards, but at best it is not equal to many other variegated plants. Cuttings and division.

ALYSSUM DENTATUM VARIEGATUM.—Of free branching habit, with lanceolate leaves uniformly belted with creamy yellow. By pinching out the fore shoots it forms a dense short growth; suitable for an edging, or a row from 6 to 12 inches wide in a ribbon. Cuttings.

GLECHOMA HEDERACEA VARIEGATA.—Golden variegation; the plant dwarf, free-growing, and forming a good edging. A lovely plant also for variegated tracery, a charming rockery plant, and a gem for hanging-baskets. Cuttings and division.

ARTEMISIA VULGARIS VARIEGATA.—White variegation. Useful for large patterns requiring a silver ground, or a back row in a ribbon. Division.

BALLOTA NIGRA VARIEGATA.—Leaves beautifully spotted with white. Forms a neat silvery bed, but requires pegging down. Division.

EGOPODIUM PODAGRARIA.—Fine golden variegation. Suitable for filling up where a light golden mass is desired. Division.

AIRA CÆRULEA VARIEGATA.—A very graceful striped-leaved Grass, its beauty being strikingly apparent in the third or fourth row of a ribbon. Division.

DACTYLIS GLOMERATA VARIEGATA ELEGANTISSIMA.—A pretty new dwarf Grass, growing about 1 foot high, forming a charming row in a ribbon; and its graceful character will render it valuable for imparting a light appearance to heavy masses of colour and stiff formal outlines. Division.

THYMUS VULGARIS VARIEGATUS.—A neat plant for forming edgings to beds, and for chain patterns. Division.

MELISSA PATERSONI (Silver Variegated Balm).—Neat and pretty for margins of beds. Cuttings and division.

LONICERA BRACHYPODA VARIEGATA (Gold-netted Japanese

Honeysuckle).—The leaves of this are permanently netted over with bright golden veins. It forms a fine bed and a neat edging, and is handsome as a climber. Cuttings and layers.

VERONICA CHAMÆDREYS VARIEGATA.—A fine plant, with the brightest of bright blue flowers and silvery variegated foliage. Indispensable for chain and small patterns. Novel as an edging. Division.

SCROPHULARIA NODOSA VARIEGATA.—Leaves blotched with white; habit vigorous, but may be had any height by pinching back. Fine for ribbons. Cuttings and division.

SAXIFRAGA JAPONICA VARIEGATA.—Hardy, with large leaves, creamy white, green, and deep rose. A first-rate plant for edgings or broad belts. Division.

VINCA MAJOR VARIEGATA.—Silver variegation. Effective, and will grow under trees, and almost anywhere. Cuttings and offsets.

VINCA MINOR VARIEGATA.—White variegation, and when trained close to the ground forms a carpet-like ornament. Cuttings, layers, and offsets.

FROSTED SILVER AND HOARY-LEAVED HARDY BEDDING PLANTS.

ACHILLEA CLAVENNÆ.—Dwarf habit; foliage silver grey; flowers white, borne in dense clusters, which require to be cut off closely, and then we have a plant for a ribbon, row, or belt from 4 to 6 inches high, and retaining its uniform height and compactness throughout the season. Division and cuttings.

DIOTIS MARITIMA.—A low, trailing, pretty plant, with blue-tinted silver grey nap; requires close pegging. Very distinct, and forms a lively contrast where green shades predominate. Cuttings.

NEPETA CÆSIA.—Hoary leaves and violet flowers. Excellent for chains or planting round beds of evergreen shrubs, as *Rhododendrons*. It makes a good small bed, and is excellent as a belt to yellow beds. Division and cuttings.

CINERARIA MARITIMA.—One of the finest silvery plants we have. A bed of this, or rather a centre, with a broad band of *Saponaria ocymoides* round it, is splendid. Suitable for ribbons, and generally useful for effect anywhere. Seed, division, and cuttings.

ANTENNARIA MARGARITACEA.—Effective silvery foliage. Suitable for belts, chains, and ornamentation generally. Division.

ANTENNARIA ARENARIA.—Effective plant for belts, chains, tessellated patterns, &c. Division. This is an Everlasting.

ARTEMISIA ARGENTEA.—As a neat half-shrubby plant with silvery grey foliage, employed as an edging to large beds or borders of shrubs, clipped to the required height and width, this is unsurpassed. It forms a uniform band or line of any size, and as a clump on a lawn is a fine object. Cuttings and division.

CERASTIUM BIEBERSTEINI.—A better and more silvery species than *C. tomentosum*; stronger in habit and more effective as an edging or ribbon plant. Division and cuttings.

CERASTIUM TOMENTOSUM.—Fine for ribbons, chains, and edgings. Division, seeds, and cuttings.

CERASTIUM GRANDIFLORUM.—Erect tuft-like habit, from 6 to 9 inches high, linear-lanceolate leaves, 1 inch long, of a glaucous silvery hue. Distinct and fine; suitable for ribbons, bands, chains, and ornamental work generally, and will be a general favourite. Division and cuttings.

STACHYS LANATA.—Glaucous woolly leaves, dwarf habit. Unsurpassed for close carpet-work and neutral belts, growing well under trees. Cuttings and offsets.

ORIGANUM PSEUDO-DICTAMNUS.—Round whitish grey leaves, and neat as an edging. Division.

SALVIA OFFICINALIS VARIEGATA.—Tricoloured leaves. Promises to be an effective plant for edgings and ribbons. Cuttings and division.

GNAPHALIUM LANATUM.—Shrubby and bushy habit, silvery foliage; effective for ribbons, edgings and belts. Cuttings.

CENTAUREA MONTANA.—Very silvery foliage. As yet scarce. Fine for centres of beds, and valuable as a hardy plant. Allied to *C. argentea* and *C. ragusina*. Cuttings and seeds.

ANTENNARIA HYPERBOREA.—Dense and dwarf tufts, leaves silvery on both sides. Likely to be a favourite for edgings, ribbons, and tessellated patterns. Division.

VERONICA CANDIDA.—Dense tufts of intense glaucous

* The true Shamrock is now considered to be *Oxalis acetosella*, Common Wood Sorrel; but the plant known in gardens as Shamrock is *Trifolium repens pentaphyllum*, or Five-leaved White Dutch Clover.

silvery leaves, 6 to 9 inches high. Very effective for ribbons, chains, and beds. Division.

GNAPHALIUM LEONTOPODIUM.—A very dwarf-tufted plant, the dense heads of flowers appear as if quite smothered in fine silky wool. As an edging plant this is distinct and effective. Division.

ERITRICHUM NANUM.—Dwarf silky tufts, with heads of rather large vivid blue Forget-me-not-like flowers. Division.

HARDY FLOWERING BEDDING PLANTS.

SAPONARIA OCTYMOIDES.—As a dwarf plant for beds nothing is more beautiful than this when covered with its myriads of rose-coloured blossoms, whilst for edgings it is one of the most striking and interesting of plants. Division and cuttings.

LYCHNIS (AGROSTEMMA) CORONARIA.—This plant has the soft silvery foliage of *Stachys lanata*, with fine racemose corymbs, 1½ to 2 feet high, of vivid magenta-crimson flowers. It is valuable for ribbons and masses. Seed and cuttings. A crimson variety, I am informed, was much cultivated twenty or thirty years ago; also, a double crimson kind, and a white one, *L. coronaria alba*, but I fear they are lost.

LYCHNIS HAAGEANA SUPERBA.—Brilliant orange scarlet flowers. Plant 1 foot to 18 inches high. Cuttings and divisions.

LINARIA ALPINA.—A prostrate silvery tuft covered with terminal corymbs of purple flowers with fiery orange centres. When strong plants two or three years old are employed, they form dense patches of great beauty. Very effective in masses. Seed.

LYTHRUM ROSEUM SUPERBUM.—Tall, dense, branching spikes of vivid rose-coloured flowers from 2 to 3 feet high, forming an effective back row in a ribbon. Unequalled for producing a heavy mass of colour. Division and cuttings.

SILENE RETICULATA.—Rose-coloured blossoms, having a charming effect in a bed. Division and cuttings.

ANTIRRHINUM.—Numerous varieties. Cuttings and seed.

ENOTHERA MACROCARPA.—Lovely large yellow flowers, one of the finest bright yellow bedding plants. Seed and cuttings.

ENOTHERA RIPARIA.—A pretty dwarf bright yellow-flowered plant. Cuttings and seeds.

LINUM MONOGYNUM.—Flowers much like *L. grandiflorum*, but white, continuing a long time in bloom. Cuttings.

ACHILLEA AUREA.—Fine golden yellow. Division.

ACHILLEA EGYPTIACA.—Glaucous leaves. Flowers pale yellow. Division.

There is a variety of the Common Yarrow with rosy purple flowers, which grows from 1 foot 6 inches to 2 feet high, and is very effective in beds.

PYRETHRUM PARTHENIUM FLORE PLENO.—A fine pure white bedding plant, suitable for a ribbon next to a scarlet. Does well in dry shady places. Cuttings and division. There are many new varieties of various shades of colour, which I think will be acquisitions.

PANSIES.—Double Purple, or Good Gracious, Trentham Blue, Purple King, White Queen, Yellow Prince. These, in beds of one or more colours, produce a fine effect, and there are few finer beds than a mass of fancy varieties or mixed Pansies. Cuttings, seeds.

PENTSTEMONS.—Charming bedding plants, of dwarf habit, and continuing long in bloom. Their colours vary from bluish purple to rosy carmine and scarlet. Cuttings.

DELPHINIUM FORMOSUM.—This forms a splendid bedding plant. Every other plant should be stopped when the shoots are 6 inches high, in order that the bloom may be of longer continuance. Flowers bright deep blue. Seed and division.

CALCEOLARIAS.—These only require the protection of a cold frame. They vary in colour, being crimson, brown, pale yellow, or orange, and are amongst the handsomest of bedding plants. Cuttings.

MYOSOTIS PALUSTRIS.—Bright blue, with pink eye. Charming as a blue edging plant. Division.

MYOSOTIS ALPICOLA (M. alpestris, Hooker).—A charming plant, forming dwarf dense tufts, and covered with large heads of flowers, which are bright blue with a yellow eye, and produced in such profusion as to hide the foliage. This is not the *M. alpestris* of gardens. It is delightfully fragrant in the evening. Division.

TRITONIA AUREA.—This forms a beautiful orange group. Roots.

ANEMONE JAPONICA, HONORINE JOBERT.—Flowers large, white; foliage handsome. Forms a fine bed for autumn flowering. Division.

The above are all of acknowledged merit for bedding purposes; and, with a number of beautiful annuals that can be raised from seed in spring without much heat, and ornamental plants specially adapted for planting singly on lawns, we can be more independent of tender plants than we imagine. In addition to those named, it is probable that many handsome plants may have escaped my notice, and of such I shall be glad to hear. G. ABBEY.

ORCHARD-HOUSES IN GUERNSEY AND IN HERTS.

In common, I hope, with the greater number of your readers, I have derived much pleasure from reading Mr. Bréhaut's articles on his orchard-house. If he will kindly make them a sort of journal as to the periods his different kinds of fruit ripen in his sunny climate he will add to our pleasure, as we shall then be able to compare notes.

He mentions his having gathered ripe Early York Peaches ever since the beginning of the present month—let us say for the sake of a date the 7th. It is now the 19th, and my only ripe Peach is the Red Nutmeg. The Early York, and Early Victoria its child, are only just changing colour. I must, however, state that my house is span-roofed, 100 feet by 24: Mr. Bréhaut's house, if I recollect rightly, is a lean-to with a brick wall at back. This will, I think, make a difference of a full week in ripening power.

Apricots are now ripening, but the little Early Sardinian is, however, just over. It is rather dry, but a perfect sweetmeat. The Early Moorpark and Oulins Early Peach are now fully ripe and of great excellence, the juice running from them in a stream when they are bitten.

I have never seen anything in fruit-culture more beautiful than my Apricot trees this season—pyramids studded with golden-ball-like fruit from head to foot, and large bushes, now upwards of twelve years old, so loaded as to compel us to support their branches with string. On two of these fine old trees are 260 fruit, of a fair medium size and of most excellent flavour.

More interesting even than these fine trees are some seedling Apricots some five years old, not more than 2 feet in height, yet weighed down by their crops. To show the improvement that may take place in raising seedling fruits, I may mention that one from that old variety—the oldest and earliest of our varieties of Apricots—the Red Masculine, has, by being crossed with the Peach, given fruit as early as its female parent, the Red Masculine, but more than double the size, and equal in flavour to that finest of all Apricots the Peach. Seedlings from the Large Early are so much like the parent as not to be distinguished from it. Seedlings from the Kaisha are most remarkably productive, and one amongst them some ten days earlier than its parent. The facility of raising seedlings, seeing them bear fruit after only a few years of care, and closely watching all their peculiarities, make the orchard-house a pomological paradise to the experimental and reflective gardener—in short, to such men as Mr. Bréhaut.

The Honey Peach, which I remember sending to Mr. Bréhaut a few years since, is a Chinese variety, with curious pointed fruit and a most luscious sweetness. I received it from Mr. Charles Downing, the American pomologist: it will probably give us a new race. The Canary Peach is from Georgia, U.S. It is not early here, for I observe that my fruit are not yet changing colour, while those mentioned by Mr. Bréhaut ripened July 11. This shows most forcibly the warmth of his orchard-house climate, and one almost feels a little envy. Still there is in all worldly matters some compensating influence. I have thousands of trees, but not a spidery leaf on them—all are green and flourishing. The greater portion of my trees have been closely pinched in to three, four, and five leaves, all the summer. I may add a useful hint to Mr. Bréhaut's excellent instructions. Many of my trees have compact round heads, masses of luxuriant foliage, and incipient blossom-buds. I have had them looked

over carefully by my orchard-house manager, and many shoots cut out with a sharp knife, so as to open the head of the tree to the influence of the sun and air.

Mr. Abbey in one of his articles (I cannot give him credit for much orchard-house practical experience), invites me to send orchard-house Peaches to Bradford, to test them with wall-grown Peaches there. Now, any fruit-gardener well knows that Peaches packed from twelve to twenty hours lose all their fine aroma. A really fine-flavoured Peach is seldom tasted in Covent Garden. My method for several years past has been to gather some Peaches from my trees in pots, to take them to my neighbour's fine Peach wall, to place them on a table in front of the wall, and then to test them with Peaches of the same kinds freshly gathered from a wall tree. I have always beaten my neighbour, my Peaches having more succulence and flavour. If Mr. Abbey wishes his orchard-house communications to have the least weight he must not any longer be a stay-at-home writer.—T. R.

STRAWBERRIES.

THE Strawberry season here is now over. The Alpines were cut down about the 6th of July, in the hopes of some Strawberries in September. These with plenty of sugar are a delicacy, and a good accompaniment to Sherry, or Rhenish wines. They are also delicious with sugar and cream. They should be in every garden. The difficulty is to keep them back till other kinds are over. Probably spring-removal would help to check their early flowering. I keep only the old white Alpines, which, I think, are better than the red. After cutting them down, I manured them highly, and have kept them well watered, and I shall see with what result. If size is wanted, they should be occasionally raised fresh from seed. This is the main reason why newly-raised Alpines are larger than the old sorts. The red and white-bush Alpines, which have no runners, but are propagated by seed, and also by division of the roots, are the largest that I have seen, and great bearers, when newly raised by seed; but the fruit loses its size by or after the third year. The plants in the second year, under high cultivation, are as high as a man's knees, and look like Horse-Chestnut trees. They will bear a little fruit the first season of their growth. Had I appliances for raising seedlings, I should assuredly keep them.

I do not believe that the Strawberry season has been good for some sorts, or for lazy people who will not pump; but I have had a glorious season. I like a West Indian sun, and plenty of pump water, both for Roses and Strawberries. The Queen, and other Strawberries known to be great bearers, in the fine lands of Blandford have been a total failure. In torrid summers the fine sorts suffer most. I have had "nil" from my Scarlet Pines.

The Strawberries that I have recommended have done gloriously. The crops were huge of these—viz., Eliza (Rivers), Royal Hantbois (Rivers), Frogmore Late Pine (Ingram), Empress Eugénie (Knevett), Wonderful (Jeyes), Marguerite (Lebreton), Bioton Pine (Barnes), and Boisselot Seedling No. 1, now called La Vineuse, a very good hardy plant, handsome, heavy cropper, uniform in shape, and of good flavour—latish. These are a good lot of Strawberries, and can be recommended safely. My old friend Trollope's Victoria did not come out so well as usual. Eolipse, the best early Strawberry, finest in flavour of the early sorts, and President, a very fine and good early Strawberry, were in single file, and though netted could not escape the hungry blackbirds and thrushes. They may be safely added to the top lot. They would have done well if let alone.

I have had other sorts, which are good as plants, and heavy croppers; but they have not been sufficiently meritorious to name them. The following are partially tried, and I believe that on further trial they will be found to be very meritorious—viz., John Powell (Ingram), Lord Clyde (Dean), and Lucas (De Jonghe). These three Strawberries are the best of the novelties, that have been here for some time. They appear to be worthy of particular description. John Powell has been well and—excepting that I cannot state its mode of growth—rightly described in THE JOURNAL OF HORTICULTURE by the Editors. It is of an uniform coned shape, firm, solid to the centre, of good quality of flesh, juicy, and fine-

flavoured. I cannot at present say whether it will be a cropper, and suited to various soils and situations, and also to diverse seasons—all important points. Lord Clyde is a strong grower and cropper, and sure to be a great favourite. It is very sweet, juicy, and fine-flavoured. I think that taking all points, plant, cropping, flavour, and adaptation to trying circumstances, it is one of the best sorts that have been submitted to me for some years. Lucas is a relative of La Constante and Bijou, but a better grower, and does not, like them, burn in torrid weather. It is a good cropper; and, as regards flavour, is in the line of La Constante. It is of good uniform shape, and not so slow to run as the above Strawberries.

In our precarious climate, early running and early establishment are very important. In land peculiarly adapted to Strawberries, and lying well to the sun, they may be planted later for next year's cropping than they can be planted here. An impostor, on being told by me that I would give him nothing, remarked, "Well, sir, you could not give me less: there is no taste in nothing, that I ever heard of." The Queen-growers have found out this; and no less a person than a coroner gave me a verdict. "Ah! what you wrote about Eliza was true. That is the Strawberry for me!" I have purchased a good degree in this county by recommending Eliza, Wonderful, Eugénie, and Frogmore Late Pines. Add the Royal Hantbois, and you see my five best Strawberries. The last two are great leaps.—W. F. RADCLIFFE, *Buckton*.

MY ORCHARD HOUSE.—No. 6.

SITTING in my orchard-house, my custom when the afternoon is cloudy, I was forcibly struck by the various shapes many large trees had gradually assumed. This was the result of growth, and as the building had, meanwhile, remained the same, much overcrowding had arisen. The shapes were altered, too, much for the worse, and would have shocked a theorist. The trees were heavily, too heavily, laden, nevertheless the unpleasant fact remained, that all symmetry was gone for this season.

This is by no means the first time that a doubt has arisen in my mind as to whether we really have the best form for orchard-houses—that is, for those houses which, like mine, are approaching to their eighth season of work. One thing is evident, that those low structures, with sunken paths and narrow dimensions throughout, can never suit for trees twelve years old, in whatever form they may chance to be trained. These houses have done a good work, and done it fairly; they may even be extremely useful for rearing young trees for succession, and also to receive any tree which, from over-bearing or otherwise, requires a year or two of rest; but they cannot meet the wants of a more advanced period of work.

Orchard-houses being a great fact, and certain to be largely built in the future, it is of the highest importance to consider the best form they should take. Much profit would result to us all if this subject could be discussed fairly and temperately. For example: it is well known that lean-to houses are warmer and earlier than span-roofed houses, and therefore should be built, in preference, in cold localities. Then span-roofed houses offer many advantages peculiarly their own—such as being loftier at the apex, and thereby giving us space for trees grown as standards, with bare stems, to raise themselves, and nothing can surpass the beauty of this class of tree if properly trained. Span-roofed houses are more light and airy; and indeed I am convinced that potted trees should be turned towards the sunny side of the house several times during the season. In this way the fruit is more highly coloured, the shoots sooner ripened, and the leaves far more healthy. But span-roofed houses have, of necessity, no back walls, whilst these walls, if covered (as is the case with my own house, which is a lean-to), with cordon trees planted at intervals of 3 feet, trained at an angle of 45°, and the whole closely pruned, it is impossible to imagine a better way to produce handsome fruit. Retaining, then, a back wall for this purpose, why should not a span-roofed structure start from the centre of this part at right angles to it, and the whole building assume the form of the letter T? By this combination much is gained, as is evident. The upper portion, being a lean-to, and not less

than 12 feet high at the back, the earliest and most choice trees could be kept there, while the lower part would suit admirably for lofty trees, and such as grow freely, and are destined to come in later in the year.

I should also strongly advise amateurs to build their houses as wide as possible, because a clear path is needed round the front to prune the trees, and especially to gather the fruit without knocking down any from the surrounding trees. My own house being very crowded causes us much trouble in this way, and the loss of fruit is something serious.

The time will come when our present houses will not suffice. The trees will become large and spread out, and if we continue season after season to overcrowd, our fruits will soon come to "their bitter end." We shall soon require two or three houses for our work, and possibly find it to our advantage to have one of these entirely devoted to resting one-third of the trees each year. Another small house will be needed for our young stock, and, perhaps, separate houses for Cherries or Apricots, which are impatient of confined air. All this we may be coming to, and long, wide, and lofty buildings for our main crops too; but our gain will be proportionately great.

This year the birds have left us little worth having out of many good things. Our Apricots have been long dismissed from out-door cultivation. I took the common standard Apricot of the Touraine, which there bears like an Apple tree, and which, also, near Paris is daily seen loaded with fruit, and, after many attempts, failed to make it bear against a sunny wall. The more delicate Plums are uncertain out of doors here, and of Cherries we could not save any. Of Early York Peaches none remain. This sort bore from the 4th to the 25th of last month. There is no early Peach equal to it. The Honey Peach from China is a remarkably pointed Peach, like an almond. Ripe on the 20th. Its flavour was quite peculiar. It was pale and about the size of the Early York. We have gathered about two hundred fruit already from the house.

The high winds which prevail in this island and the cloudy sky are not favourable to fruit culture. The currents of air shake down the ripening crops and cause us loss.—
T. COLLINGS BRÉHAUT, *Richmond House, Guernsey.*

GOOSEBERRIES—RAISING SEEDLING FRUITS.

My thanks as one of a thousand who welcome right heartily the attention bestowed in your last Number on the homely undervalued Gooseberry. Filling up the gap between the latest of our Strawberries, that are palatable without the addition of sugar, and the earliest Jargonelle, it has a value in out-door fruit-culture which its unflinching excellence and certainty in cropping have led us all too much to forget. Your notice of the doings of the revived Fruit Committee of the Horticultural Society must have opened the eyes of many lovers of a good Gooseberry to a progress in connection with this fruit of which they were altogether unaware. I write now to know more of what is almost all new to me.

Some six years ago I made a collection, numbering upwards of a hundred sorts, of every Gooseberry within my reach, which either the Catalogue of the Horticultural Society or nursery lists classed as first-rate in flavour. Year by year I have weeded from these the less worthy, till, with a selection of scarcely over a dozen distinct kinds, I have a really fine plantation, whose produce I would not exchange for any other fruit in the garden. Somewhat to my surprise, of the long list of good, and tolerable number of extra-flavoured varieties which the Fruit Committee selected, all, with the exception of perhaps half a dozen, are novelties, occurring neither in the Society's Catalogue nor in the nursery advertisements. I hope they are comestable by others than the Fellows of the Society. Can you help us to the whereabouts? for though on the border of Lancashire and Cheshire, none of our nurseries here have any but the stereotyped list, which the London trade have scarce altered for the last ten years.

For this progress in fruit culture, it would seem, we are entirely indebted to the humbler population of this district, who, whilst aiming at little else than increase in size, stum-

bled, as it were, on something far more valuable. What might we not look for, and not in the Gooseberry only, from well-directed imitation of the good works of these real cottage gardeners? I have sometimes, whilst mourning over the flavourless burlesques of your south of England Golden Pippins, which our northern orchards produce, wished to see a Seedling Fruit Society started, with the JOURNAL OF HORTICULTURE as its organ, embracing the whole country in its operation, to further the production of new native varieties of our hardy fruits. I would have just one qualification of membership, the *bona fide* sowing of a minimum of one hundred seeds per annum, the seedlings therefrom to be reared till fruiting, and samples of the material results forwarded for commendation, or otherwise, to the Journal's Pomological Editor. Is not something of the kind practicable? See what one man has done for the Strawberry. What would this delicious fruit have been but for Myatt and those who have, not too late, followed in his steps? Not to speak of Knight and Williams, and our Belgian pomologists, to how much are we already indebted within a year or two back to the quiet labour of Mr. Huyshe? (By-the-by, you promised us, so far back as January, a paper on the Huyshe Pears, for which I have looked very often in vain.) Experience would seem to indicate that out of several thousand seedlings a few splendid prizes are almost a certainty. A society for the special purpose might fruit fifty thousand every year with a very little effort. Say the word, Shall we begin?—FRUIT-EATER.

BEDDING GERANIUMS.

(Continued from page 72.)

THE next best system of raising a supply of bedding Geraniums is to place a cold frame in an open situation so that the lights may face the north, previously laying down a layer of rough ashes from 3 to 6 inches thick for the frame to rest on, and to keep out worms. Place within it 6 inches of compost formed of turfy loam one-half, leaf mould one-fourth, and river sand one-fourth; and having made the surface level, put in the cuttings in rows 3 inches apart, and 2 inches from cutting to cutting in the rows. This done gently, press the soil round the cuttings, giving a gentle watering afterwards to settle the earth about them and to refresh the foliage. The lights are then drawn on close, and kept closed for a period of a fortnight if hot dry weather succeed the operation, opening them only for the purpose of watering, which should be done so as to keep the soil constantly moist but not wet. Should dull weather follow, the frame may be opened for an hour or two in the morning to afford a change of air and to prevent damp; but if all be well there is no necessity for this, nor for shading the frame unless the air be hot and dry. In the latter case a thin mat or two placed over the frame at 10 A.M., and taken off again at 3 P.M., will be all the shading needed; for, owing to the frame sloping to the north, more than half of the sun's rays will be reflected by the glass, hence there is not that scorching heat that there is in a frame facing the south. The cuttings will be rooted in three weeks, when air may be admitted, moderately at first, gradually increasing the openings daily, so that the lights may be removed altogether in seven days more, or a month after the cuttings are put in. The frame may then be removed altogether and placed in some suitable situation, and the process repeated on another lot of cuttings inserted in it by the 1st of September; but this time the lights should slope towards the south, for we must now endeavour to catch as much of the sun's heat as possible.

The cuttings struck by the 1st of September will be nice plants by the end of that month, when they may be potted into 48-sized pots, or 60's if small plants, and be placed in a house with a greenhouse temperature; but if room be scarce it may be worth while considering whether it is better to pot the plants or transplant into boxes, which will hold double the number in something like one-third the space. Strong plants, however, in my opinion are best potted at once; but such as are only just rooted may be wintered in boxes much more economically as regards space. The boxes used for this purpose are those narrow shallow ones such as we very often see employed for growing Mignonette for

windows, and are 4 feet long, 6 inches wide, and 4 inches deep, and will hold four dozen plants each. In filling them begin at one end, and after placing 2 inches of rather rough compost at the bottom of the box, put the first plant an inch from the end and side in one corner; then two more plants, one in the opposite corner like the first, and the other plant in the centre. Put the soil neatly round these, and then put in another row 3 inches from the first, and so on to the end. The plants are then well watered and placed on a shelf, or in any light airy situation from which frost is excluded. In April they are transplanted into cold frames with a ball of earth to each, and about 3 inches apart every way, the lights being kept close for a few days to encourage root-action; afterwards air is admitted daily and water given, and they ought to be well hardened by the third week in May, when they may be taken up with balls and planted in their final quarters. It should be borne in mind that if severe frosts occur some protecting material is necessary to be placed on the frame at night. The points of the shoots should be nipped out to make the plants bushy: this ought to be done in March, before the plants are transplanted into the cold frame.

Though the above systems answer very well where there is a greenhouse, yet there are those who have not such conveniences; but even they may have their hundreds of Geraniums. To accomplish this is not difficult; for if cuttings be taken early in August, and inserted in the open ground in any light soil to which a little leaf mould and sand has been added and the whole well mixed, they will strike root quite as freely as pieces of Dock roots, if the soil about them is kept moist and a little shade afforded from bright sun. By the middle of September these may be taken up, potted into 60-sized pots, and wintered in a greenhouse, potted in March into 48's, stopped a week afterwards, hardened off by placing out of doors in turf-pits in April, and protected from frost by mats or other covering. Where no greenhouse exists boxes about 3 feet long, 6 inches wide, and 3 inches deep inside measure, should be provided, and a few holes bored in the bottom to allow the water to escape. On the bottom of each box 1 inch of the rougher parts of the compost should be placed, and then an inch of fine compost, consisting of turfy loam three parts and leaf mould one part, with a free admixture of sand. Into this box the cuttings are put in as close together as possible without actually touching each other, soil being placed around them neatly, and to within half an inch of the upper edge. They are then watered, and placed under a hedge, wall, or in some other warm sheltered situation.

When frosts sufficient to cut off Dahlias and other tender plants in open situations occur, the plants must be removed in-doors. Any spare room will do providing there is a window to admit light and air; but as very few have a room to spare, the boxes may have to be placed inside on the window-board, but if there be no such support, or if there is danger of injury to the window-boards, neat iron brackets may be used for placing the boxes on, whilst a loose bottom will do all that is necessary to preserve the window-board. In such situations the greatest care is necessary not to over-water the plants, but to keep them dry at the root, and give no more water than is just necessary to keep them from losing their leaves. If the windows have a southern aspect it will be all the better, for an hour's sun will suggest the possibility of giving a little air, which in mild weather is best done by placing the boxes outside on holdfasts driven into the wall, where they will enjoy the fresh air, and the heat of the sun reflected by the wall. Whenever the temperature permits of their being placed outside, it should be done, always taking care to remove them inside before the air is cooled down to freezing-point. When very severe weather sets in, and the plants are likely to be frozen by their close proximity to the window, even if shutters be employed, it is easy to remove the plants to a secure place, as a kitchen, at night, and in the day also until such time as the weather changes, when they, of course, may be returned to their proper quarters. If brackets are provided, there will be no necessity to remove the boxes, but only to take them down until the shutters are closed, when they will, of course, be placed on the brackets again, and the plants will sustain no injury if a fire has been in the room during the day. Now, with a box of plants in every window, or some

of them, a nice stock of Geraniums may be safely preserved over the winter.

When the days are getting longer the boxes should be placed on brackets or holdfasts in the south wall daily by 8 A.M., when the thermometer exceeds 40°, and be taken under cover by 5 P.M., and this treatment must be continued daily (weather permitting) until the beginning of April, when the plants, after remaining stationary during the winter, will be showing signs of growth. If turf can be had in sufficient quantity to make a wall round a square bed 6 feet by 4 feet, we have only to choose a warm, sheltered, open situation, and to form a sod wall 1 foot high in front, and 18 inches at the back, with ends to suit, so that there will be a gentle slope from the back to the front. Within this 3 inches of leaf mould is placed and worked into the soil about 6 inches, and if the soil be light and sandy it is all the better, but if it be heavy an inch deep of river sand spread over the surface and well worked in, will much improve the staple. Taking the plants up with balls out of the boxes, plant them in the turf-pit in rows 4 inches apart, and 3 inches asunder in the rows. Give a gentle watering, and if any old lights are at command place them over the pit, but if not, sticks must be used to support some protection such as mats. The covering should vary in thickness according to the state of the weather, be put on early in the evening, and remain on in the morning until the sun has subdued the frost, and the air becomes warm; but should the frost continue all day do not remove the covering, for the plants will not be injured by being kept in the dark, if they do not grow. What watering is required should be given in the morning, so that the plants may be dry before night. As the weather becomes warmer the plants will grow rapidly, and must, therefore, be well supplied with water. They will need no protection except from frost. By the beginning of June they will be fit for transplanting into the flower garden, taking them up with a ball, having previously trodden between the rows and given a good soaking of water.

By this simple treatment some nice beds may be furnished with the hardier kinds of Scarlet Geraniums, as Crystal Palace Scarlet, Lady Rokeby, Little David, Tom Thumb, Trentham Scarlet, Spitfire, and Christina. These with most of the Zonale and hardier kinds of variegated Geraniums will strike out of doors quite as freely as under glass, only they are longer in doing so. Most of them require to be put in by the second week in August at the latest, or they will not root well. Some of the better kinds of scarlet and variegated Geraniums will not do any good under such treatment, it being at the best a precarious method, and it should never be resorted to unless other means are not at command. Cuttings of most Geraniums, however, will strike root in the open air if inserted from the 1st of June to the second week in August, after which they must be placed under glass.

I now come to the most pleasant part of the business, for I have to treat of the propagation and preservation of old plants under glass or otherwise, but I must leave this for another communication.—G. ABBET.

(To be continued.)

CHICKENS VERSUS GREEN FLY.

I AM anxious to add my testimony to that of "WILTSHIRE RECTOR," in your Number of July 19th, with regard to the utility of chickens in a garden. This year my Peas, as everything else, have been covered with blight, and I have many times seen the chickens, perched upon the Pea sticks, eating the green fly as fast as possible, and when my man is picking the Peas, the chickens follow him, and so surround him that he is in constant fear of treading upon them, in order to seize on the green fly as they are dislodged by the shaking, and fall to the ground. My experience is, that up to six weeks old, chickens do much more good than harm in a garden.—A. K. C.

ORCHARD-HOUSE PRODUCE.—I hasten to correct an inaccuracy in the statement I made in last week's Journal relative to the sale of Peaches and Nectarines in Covent Garden from my orchard-house: instead of 80 dozen in five days, I find from my gardener's account there were only 71 dozen, and that 42½ dozen have been since sold.—AMATEUR.

BEST OF THE NEWER ROSES.

It is due to Mr. Murray to say that he wrote to me on the subject of the lecture (date July 11th), but directed it to Congleton. It went to Rushton near Leek, and Rushton near Kettering, and hence arrived too late here. To prevent mistakes in future, letters to me should be directed to Tarrent (corruption of Torrent) Rushton, near Blandford, Dorset. There was formerly a wealthy family of the name of Tarrent in this county. It is not improbable that the prefix was derived from them.

I have read "D," of Deal's two interesting Rose communications. His descriptions are very good. There is one Rose, Madame Julie Daran, that he is mistaken about. It has but one fault—it wants fixity of colour. It is perfectly full to the centre, of fine outline, with smooth well-disposed petals of great substance, and blooms abundantly. The growth and foliage are admirable. It is one of the fullest of its year.

Perhaps it may assist nurserymen and amateurs if I give a list of the newer Roses worthy of propagation.

1. Charles Lefebvre, Duc de Rohan, Maurice Bernardin, John Hopper, Prince Camille de Rohan, Madame Julie Daran, François Lacharme, Maréchal Vaillant, Madame Boutin, Professor Koch, Madame C. Wood, Madame Clemence Joigneaux, Alphonse Damais (smallish), Sœur des Anges (occasionally magnificient, but often cracky, or unilateral), and Olivier Delhomme, not a strong grower. Mr. Cant's trebles of Monte Christo were extra beautiful on June 29th. It is suitable only to first-class lands, and requires more looking after than the above.

2. *Roses of 1862.*—Alfred de Rougemont, Baronne Adolphe de Rothschild, Madame Freeman, Vainqueur de Goliath, President Lincoln, Madame W. Paul, Mr. W. Paul, Baron de Rothschild, and Le Rhone, not a sturdy grower.

3. *Roses of 1863.*—Lord Macaulay, a fine Rose of great substance, endures sun well—A1. Lord Herbert and Lord Clyde I only know by the sight of their blooms. They appear to be Roses of great excellence. Mr. W. Paul kindly sent me buds of Lord Macaulay, Princess of Wales, and Lord Herbert. The buds have taken, and are growing freely. The wood sent was strong. I cut up my plant of Lord Clyde (apparently not a very strong grower), for the same purpose. It took immediately, and is growing freely. Mr. George Paul's specimens of it at the lecture-room were grand. Mr. W. Paul also exhibited fine specimens of Lord Macaulay and Dr. Lindley, a good Rose of great substance.

In conclusion, till we get Roses on strong stocks we can only approximate. All the above Roses, not excepted to, are good growers, hardy, and beautiful. These are good useful Roses for the garden:—Duc de Bassano, Peter Lawson, Vicomte Vigier, and Madame Alfred de Rougemont. They are good growers and hardy.—W. F. RADCLIFFE, *Tarrent Rushton*.

GARDENING UNDER DIFFICULTIES.

I USED to imagine, in looking back on some of my gardening experiences, that I deserved some little credit for the manner in which, at certain periods of my horticultural experience, I had surmounted some difficulties. For example, when on the top of a cliff overhanging the sea I used to have flowers the admiration of the neighbourhood, or in a small back yard in a confined street of a fashionable watering place I managed to grow some creditable specimens; but what I have seen lately induces me now to think that I have had no difficulties, and that they were only the effect of a disordered imagination. It may be useful, perhaps, for those "Constant Readers," "Subscribers," &c., who are oftentimes sorely puzzled because their Scarlet Geraniums are not all of a height, or that their Hyacinths will not grow if they plant them upside down, and who want to know why the wind will persist in blowing off the blooms of their Roses, to record what I have seen lately of gardening under difficulties in the west of Ireland.

I have not visited these regions (for this is written on the very borders of the Atlantic in Donegal), for thirty years; but even then I knew something of flowers, and can appreciate now the change which care and time have wrought. No one can have any conception of the opposing elements

in these regions. It is not that the soil is at fault, for in many places it is good, and can be made so; but the awful hurricanes that sweep along, and the continuous rains, are something that we in our southern counties know but little of.

In Achil, a gentleman of the name of Pike has built for himself a commodious house, where he dispenses an open-handed and generous hospitality, and where he has fairly combated and beaten the elements. His difficulty, and indeed the difficulty all along this coast, is to beat out the westerly gales, and consequently plantations must be made at some distance as a fence; and when they have grown up a little, then more tender trees, shrubs, and gardens may be arranged. Thirteen years ago there was not anything higher than a Heath near his house, now plantations are rapidly rising up; and his garden was well supplied with various fruits and vegetables. Abundance of Cherries (though, I am bound to say, not equal to our Bigarreus), Gooseberries, Currants, and excellent Strawberries were found there; while Fuchsias formed bushes as large as Laurels, and various herbaceous plants, Roses, &c., enlivened the gardens. Here, of course, a lady's hand was visible, and well was she rewarded for her pains. I saw two Wellingtonias about to be planted, but I fear they will never attain very gigantic proportions; but the *Pinus maritima*, of which the proprietor had received a quantity from Lord Palmerston, promised to be a very valuable tree, as it withstands the sea breezes so well. From its proximity to the sea there is one advantage gained—that frosts do not so easily affect things as they do in more inland situations. At Cliffoey in Sligo our noble Premier has made a laudable attempt to induce the peasantry to have a little more care over their gardens, and has striven to encourage a love of flowers. He has a large space enclosed, which is called his lordship's garden; and in this his steward cultivates some of the more hardy herbaceous plants, Phloxes, Delphiniums, &c., as well as Roses and shrubs, and distributes these amongst the people. Their little front gardens are enclosed with walls, and in these their flowers, &c., are planted.

I am sorry to say, however, that the cocks and hens, which form the invariable accompaniment of every cabin, wage deadly war with the flowers, and the results are not such as his lordship would wish. It was very curious here to witness the effect of the westerly gales: where a thin hedge had been planted, not only had the trees received a bias towards the east, but there was not a single leaf on the westerly side, while they were completely arched into green arbours, the foliage all being on the easterly side. Again, in this place (Gweedore), an hotel for the convenience of travellers has been built by Lord George Hill, in a gully (for it is not a valley), into which the whole force of the westerly winds sweeps. To this hotel there is attached a garden, and in it there is a very good assortment of hardy plants, which are thriving well, while the *Mignonette*, *Nemophila*, &c., enliven it.

Oh! ye thick-and-thin advocates of the bedding-out system, what would ye do here? or how could a garden like this be supplied but for those "rubbishy" herbaceous plants, which are now not considered good enough for our gardens? Twenty years ago there was nothing but Heather and bog in this place; I saw now in the garden as good crops of vegetables as one would wish—late Marrowfat Peas, Raspberries, Currants, and Strawberries, while the staple commodity, the Potato, was flourishing. All this surely shows what can be done by perseverance. I should add that I have never seen *Cotoneaster microphylla* in greater luxuriance and abundance; and I have little doubt that, were time to be bestowed, many a pretty flower might be induced to bloom; and what noble ferneries might be made here! I saw a plant of *Osmunda regalis* growing on the roadside to-day, and many fine plants are to be found in various localities in the neighbourhood.

These few notes are somewhat out of my ordinary course, but they may be useful in leading some to see that their difficulties are hardly worth mentioning when compared with such as these, and also may encourage some who might think that they are too unfavourably situated to attempt anything; and it is to be remembered that these are not the efforts of professed gardeners, they are done in a quiet farmer-like way, and I have no doubt that were a little more

care and attention to be bestowed that much more might be effected.—D., Deal.

P.S.—The following will give an idea of what can be done in a wild country by a patriotic landlord, such as Lord George Hill:—

STATE OF GWEDDORE IN THE YEAR 1838.	STATE OF GWEDDORE IN THE YEAR 1856.
The roads and bridges in existence at this period few and scarcely passable.	Roads and bridges numerous, and in excellent condition.
No carts used.	Thirty-two carts.
The land held in common, or rundale.	Almost every tenant has his farm to himself. In 1841-43 the estate was surveyed, valued, mapped, and the farms divided.
Constant quarrels and litigation as to trespass.	Petty sessions every fortnight, and very little business.
No progress in agriculture.	600 acres reclaimed since the land was divided into farms. Flax, Turnip, Clover, and Grass seeds sown in small quantities.
No post-office nearer than ten miles.	Three post-offices, and a daily mail car, in the Gweedore District.
A very primitive corn mill, neither capable of cleaning the corn, nor of sifting the meal; and none superior to it within thirty miles.	A first-rate corn mill, with kiln attached. This mill, which was completed the year of the famine, worked then night and day, and ground 688 tons of Indian corn.
No baker, nor bread sold within ten miles.	An excellent baker, whose sales amount to upwards of £200 annually.
No market for produce.	A large corn store, at which more than 130 tons of oats were purchased last year for exportation, and to which eggs, hides, fish, butter, and kelp, are brought in large quantities.
Nothing like a shop in the district.	An extensive shop, at which all necessities can be purchased at a reasonable price.
No medical man or dispensary within ten miles.	Dispensary, and weekly attendance of a medical man.
No Protestant church, burying-ground, or clergyman within ten miles.	A school-house, licensed for Divine service (congregation averaging fifty persons) a Protestant burying-ground, and a resident clergyman.
Only three houses in which lime had in some measure been used in the building; others all dry masonry, or stones laid in mud.	More than 250 houses, in which more or less lime and whitewash have been employed.
No hay could be purchased nearer than twelve miles.	Model farm at the Gweedore Hotel, producing from 50 to 60 tons of hay.
No inn, or decent house, in this part of the country, in which a person could put up for the night.	Gweedore Hotel, much frequented by tourists, and from which the mail car starts every morning at 10 A.M., and returns at 3 P.M.
But little butter fit to eat, and in small casks.	Good market butter, put into wooden vessels.
Not a boat-pier on the coast.	Quay and landing-place at Bunbeg for vessels of 150 tons.
Anchorage under Gola Island and in Gweedore Bay unknown.	Vessels can now be chartered for Bunbeg and Gweedore from any other port; and the anchorage is properly buoyed.
No trade or home manufacture.	Kelp is shipped from Bunbeg. In 1854, Gweedore hand-knit socks and stockings were sold to the amount of £600; and in 1855 to the amount of £500, during the Crimean war.
Rent irregularly paid, and difficult to collect; amounting to about £500.	Rent regularly paid.
Arrears upon the property, £1000. The good-will or tenant right received by those who sell their farms varies from fifteen to thirty years' purchase.	Arrears under £10. The amount given for the good-will of a farm is upon the increase, the competition for land being very great.
	No. of cattle belonging to tenants, about ... 1700 head.
	No. of sheep belonging to tenants, above ... 4000 "
	No. of horses belonging to tenants, about ... 300 "

It is a remarkable fact that there is scarcely any decrease in the population of the district since the famine in 1846.

NOSEGAYS.—Flowers should not be cut during sunshine or kept exposed to it afterwards; neither should they be kept in large bundles and tied tightly together, as this invariably hastens their decay. When in the room in which they are to remain, the ends of the stalks should be cut clean across with a very sharp knife (never with scissors), by which means the tubes through which they draw the water are left open, so that the water ascends freely, which it will not do if the stems are bruised or lacerated. The stalks should be inserted in pure water. This water ought

to be changed every day, or once in two days at the farthest, and a thin slice should be cleanly cut off from the end of each stalk every time the water is changed, which will revive the flowers. A glass shade preserves them remarkably.—(Farmer and Mechanic.)

WATER AS AN ORNAMENTAL FEATURE.

WATER!—clear and sparkling water!—what pleasing ideas are conjured up by its name, more especially in the hot dry weather of the dog days! And the sun-scorched mariner, ever and anon becalmed under the broiling sun of the tropics, with but a very limited allowance of this fluid in a state fit for his use, recalls to memory the sparkling streams of his native country. The poetical allusions so often met with in Holy Writ, place "streams of water" as the most important features of those lands having more than an ordinary share of Nature's blessings; and in all countries water is esteemed one of the greatest boons. Many an arid waste owes its barrenness to the absence of this all-important fertiliser; while in districts where its amount is inadequate to the wants of the inhabitants very lamentable results are the consequence. The infant soon learns to dabble in water; in childhood the edge of a pond, river, or canal seems to be possessed of irresistible charms; and at a more advanced age the ocean receives its share of patronage from the more adventurous, while those less disposed to travel may often be met with in groups looking earnestly and steadfastly at every sheet of water they meet with. A solitary passenger rarely crosses over a bridge without looking over its side to have a peep at the stream below. Journeys of scores, nay, hundreds of miles, are often taken to get a sight of some of those noble sheets of inland water with which our own and some other countries are blessed; and the purse of the affluent has often been widely opened to form some artificial feature in water. Indeed, it seems to be an element closely blended with all our ideas of what is beautiful.

In many places of the highest note water forms an object of the greatest possible importance, and next if not quite equal to shrubs and trees. The value of water may also be easily understood by the careful way in which it is economised. In most places of note water is made visible in some form. If a stream cannot be commanded a piece of still water is made to do duty; and now and then highly ornamented or elaborate works of art are devoted to its reception, but even without the aid of these it is at all times attractive, even in its simplest form. Let a visitor to Hampton Court but take the trouble to ascertain whether any portion of the beautiful grounds receives more attention than the circular basin of water with its gold fish. All classes seem to delight in gazing on the glassy or rippled surface of water wherever it may exist, be it as a noble river, a running brook, or a placid pond.

Water, therefore, may be regarded as a universal favourite; and considering that it is of such importance to the well-being of the community, we need not be surprised at now and then hearing of disputes where it is misapplied or its purity destroyed. Pure water is now admitted to be of as much consequence to the public as pure air. Its uses, however, for ornamental purposes in gardens are those to which I chiefly intend to confine myself, and I must pass over topics such as the above as being out of place.

Water being so essential a feature in all dressed grounds, there are few places where its introduction, at whatever cost, is not desirable, not only for its own sake but also for the display of the works of the architect and sculptor, and which otherwise it might not be possible to bring in with propriety. How much the noble gardens at the Crystal Palace would lose in public estimation if deprived of their fountain! Not less important are the cascades and fountains at Chatsworth; while the silvery Thames lends its aid to the noble grounds at Cliveden. Kew is perhaps less blessed with water than most public gardens, but the Thames runs by it, and a sheet of water forms a foreground to the view in one direction from the large Palm-house; lakes and borrowed streams are doing duty of a like kind in hundreds of other places.

Water as a feature in the landscape is so much valued that

its presence is courted at times, perhaps, when good taste might even question its being in character with other things; but these cases are comparatively few, as there are few places where it may not be appropriately admitted. Perhaps one of the principal objections to its use as an ornamental feature is where it cannot be had in sufficient quantity to keep itself clear. Muddy impure water is at all times objectionable, but it is questionable whether the plan of removing and destroying everything of a vegetable kind that exists in water is good; on the contrary, stagnant water is rendered more pure by the vegetation which is supported by it. Many a pond in an undisturbed corner is entirely covered over with duckweed, presenting a pale green surface completely hiding the water, and yet no hurtful effluvia arise. Nature in this case, as in many others when she is not hindered by officious hands, provides the antidote as well as the poison; and it is not until the ditch, pond, or watercourse is disturbed that any noxious vapours are diffused. A rank coarse herbage of other plants often accomplishes the same object, the rankness and vigour being in proportion with the quantity and quality of the food; so that our country friends living near stagnant pools have less cause to be alarmed in summer than they may expect. The vapours arising from wet, marshy, undrained land are quite different. The more exposed sheets of water are to the action of the winds the purer and better they will be, the moving mass being less likely to pass into a state of impurity than when it is less agitated. In many places of note the most important feature is water, and in some the duties water is made to perform differ in reality but little from those of the modern flower-bed—witness the beautiful form that ponds have been made to take in the exquisite grounds attached to the ruins of Fountains Abbey, at Studley Park, Yorkshire.

Water may be considered scarcely less necessary than trees and shrubs in a complete place, and I advise all who can command its services to do so ere the many water companies and others using it appropriate it to themselves. The present age seems as prolific in its demands for running streams and their diversion as that of the engineer Brindley. To make the most of such streams behoves the landscape gardener.

Water as an agent in the hands of the man of taste may be a suitable subject for another article.—J. ROSSON.

THE WANT OF VARIETY AMONG TREES AND SHRUBS IN PLEASURE GROUNDS

AND ORNAMENTAL PLANTATIONS.

THIS want, as noticed by Mr. George Gordon in your pages, is a most interesting subject, and one that requires more attention. How many plantations are formed without due regard being paid to displaying the natural characters of the trees. The planter cannot obtain much information at our nurseries relative to the best mode of employing the various species. The whole subject is one that requires much study and practice, and no man has had more practice as a planter of ornamental trees than Mr. Gordon, and no collection can be found in this country equal to that in the Horticultural Society's Chiswick garden, the growth of about thirty years. That collection is worth going a long way to see by those contemplating planting for ornamental effect.

A few days since I walked through the Chiswick Gardens with Mr. Gordon for the purpose of getting all the information I could about trees and planting, as I was about starting for the north of Ireland and north of England to lay out plantations for autumn planting, and I send you the description of the fine *Acer macrophyllum* in the arboretum at Chiswick, which he has forwarded me in answer to a query. At the same time I must inform those who go there without a guide to look up into the body of the tree for the label, otherwise, although the tree is distinct in character, they might have some trouble to find it.

I cannot conclude without expressing the regret I felt at observing the neglected state of the Chiswick arboretum.—JOSEPH NEWTON, 30, Eastbourne Terrace, Hyde Park.

"*ACER MACROPHYLLUM*.—In its native country the Columbia Maple forms a very large deciduous tree, exclusively

confined to the woody mountainous regions along the sea-coast, between 40° and 50° north latitude, and to the rocky base along the great rapids of the Columbia river in North-west America.

"It was first introduced into Europe by the Horticultural Society's collector, Mr. Douglas, in the year 1827, and who stated at the time that it was one of the finest and most graceful trees in the country where it grew, varying from 40 to 90 feet in height, and from 6 to 16 feet in circumference in the trunk. Mr. Douglas also prophetically added that, 'it would at some future time constitute one of the finest and most ornamental forest trees in England.'

"The Columbia Maple is one of the most rapid-growing trees we have, as the fine specimen in the Chiswick arboretum proves. It was planted in the spring of 1828, and in seven years attained a height of 25 feet; while in 1845, or ten years later, it was 50 feet high, and now (1864), little short of 80 feet.

"The branches are numerous, wide-spreading, rather stout and straight, with the bark on the young trees very smooth and green, while that on the old ones is rough and brown. The leaves are sometimes nearly 1 foot broad, very smooth, of a bright glossy green, which in the autumn dies off to a yellowish-brown colour before the leaves fall. The flowers are produced in long, dense, finger-like spikes in April and May, just as the young leaves are beginning to unfold, and are of a yellow colour, and very fragrant. The wood is soft, beautifully veined, and in the specimens of the timber sent home from the banks of the Columbia scarcely inferior in beauty to the finest satin wood.

"The tree is perfectly hardy, and grows well in all soils and situations, and should find a home in every park and pleasure ground in the kingdom.—GEORGE GORDON."

THE LATE JAMES FINLAYSON AND THE PAISLEY FLORIST CLUB.

SINCE the publication of your May Number, the oldest florist in the West of Scotland has been removed by death. The late James Finlayson, of Paisley, was in some respects a representative man, and a few words respecting him will no doubt be acceptable to your readers, many of whom knew him well. His simple and blameless life, as well as his devotion to the improvement and cultivation of florists' flowers over a long life of eighty years, are sufficient warrant for recording a brief tribute to his memory, and the horticultural journal of the district in which he resided would seem to be the most fitting place. He was hale and hearty, and keenly enjoyed his occupation among his plants and flowers, till death struck him down suddenly in the midst of his work, at the ripe age of eighty years. He was bending over his favourite flowers when he died. His old florist friends who knew him intimately, and with whom he had many a tough competition and tougher argument, will feel his loss keenly, and none more so than Mr. William Robb, who has himself reached the same age, and Mr. John Watson who are now the two oldest florists in Paisley, and perhaps in Scotland. The trio belonged to the "Paisley Florist Club" in its early days, and many are the droll reminiscences they could tell concerning it. The deceased Mr. Finlayson's father was Secretary of this Club, which was in existence as far back as 1782; indeed flower shows were held in Paisley previous to that date. Its origin however, cannot be traced, the earliest record-book having been burnt, for what seems to us the strange reason that the box of the Club would not contain the whole of the books and papers, and the old minute-book was destroyed to make room for books that were considered of more importance. Dr. Carswell, who first introduced the Carnation to the Paisley florists, was for many years a leading member of the Club, as was also Mr. Sharp, who has long rested with his fathers, and who was in his day a most successful florist. These departed worthies have left many pleasant memories in the minds of the few remaining old florists, who were at that time young men. Dr. Carswell seems to have been of a kindly, genial disposition, with a good deal of droll humour, which frequently found vent at the meetings of the Club. He did not like dressing flowers for competition— which, by the way, we had not thought to be such an ancient

practice—just imagine flowers being dressed eighty years ago. The worthy doctor called it "Thumbing" and told the weaver florists that their fingers took all the enamel off the petals and spoiled the flowers.

Long before Paisley was lighted with gas, the doctor had a gas-making apparatus for his own use; and as he could make more than he needed, he lighted one or two neighbouring shops. Gas was a novelty in those days. On one occasion he had been advised to try gas tar as a destroyer of a certain species of insect that sometimes infests the wood-work of old and even new houses; and when a florist friend asked him if he thought it would kill the domestic intruders, he said there was no doubt of that, for he thought the smell of the tar was going to kill the whole family.

But I must leave Doctor Carswell and the Old Club, and speak of the late James Finlayson. He is known to have exhibited Carnations in Edinburgh as early as 1815, and he is said to have gained his first prize for flowers in 1792, when he was only eight years of age. This may be correct in a certain sense, as he might have been exhibiting his father's flowers, but he could hardly claim the credit of growing them himself. For many years, and indeed up to last season, he attended most of the local shows, at which he was always in demand, but his great days were in connection with the Paisley Club. It was the custom to meet once a-week, each member bringing whatever he pleased; the flowers were then laid out, judges appointed, and the awards made and entered in the records of the Club. On one occasion it was recorded, I think by Dr. Carswell, that "James Finlayson had the best Polyanthus, and he would have been a very bad florist if he had not, for it was the only one there." Money prizes were not thought of in the old days; the honour of being first was the only prize competed for by these primitive florists, and there is no doubt that their love for the flowers they cultivated must have been very strong. Mr. Finlayson was somewhat severe in his judgment of new flowers, and sometimes expressed his opinion with more vigour than elegance. When an Auricula called Dean's Delight came out many years ago he gave his verdict on it thus—"Tak' that by the cuff o' the neck and put it in the midden." He was a good hand at nursing seedlings: very few died with him, which gave rise to the saying that he was in the habit of putting warm bricks to their feet. His chief favourites were Carnations, Picotees, Pinks, Polyanthus, Ranunculuses, and Auriculas, to which he devoted his whole attention on a small plot of ground in Paisley, for the last thirty years. Up to that time he had followed the occupation of a weaver.

Perhaps the best things he has raised are Auriculas John Bright, Richard Cobden, and Mrs. Beecher Stowe, which are said to be excellent varieties, and the two latter have never been sent out. Mrs. Beecher Stowe he said he would give to no one while he lived. He was very conservative of his plants at all times, and was very particular to get his price for those he sold. It was his practice to grow his flowers very fine—he disliked a coarse flower—and the result of growing in poor soil for the sake of fineness was that he seldom had much stock of choice or new varieties. He was an excellent judge of the flowers that were grown in the early days of floriculture, such as those he was in the habit of growing himself; but he maintained to the last that no improvement had been made in Carnations: he said they had more petals, but they wanted size.

He was much sought after by the working class for two mixtures, which either were in reality, or were believed to be, curatives of rheumatism and diseases of the eye. For these he never would take any reward. In his latter days his great pride was a walking-stick made of the stem of what is called a Clothier's Thistle, which he took great delight in showing and challenging people to tell of what wood it was made. He was one of the links that connected the present generation of florists with those who made pets of certain flowers in the olden time, and made the first efforts to improve them. The old Paisley florists, most of whom are dead and gone long ago, must have the credit of introducing florists' flowers to the West of Scotland, and of fostering that taste for them which is now spread far and wide. In this work the late Mr. Finlayson did his share. There are one or two old florists in Paisley who will, I dare say, be able to give you some additional details, if you think

these few disjointed remarks wanting in interest; but there is little in the way of incident to be found in a calm and even life like that of Mr. Finlayson. He discharged the duties of his position with fidelity; so far as his means and opportunities went he promoted floriculture; but he has left his earth-born treasures to cross the dark valley, and the sound of his footsteps will be heard no more. "Life's fitful fever over, he sleeps well."—N. G. (*West of Scotland Horticultural Magazine*.)

WHITTLESEY'S LOCOMOTIVE SEAT.

We had the misfortune to have to do all our hard work in a generation when every plan for doing work easily was considered as indicating laziness. The locomotive seat would have had no chance of success in that day; but the wonders of the real locomotive have broken down all this prejudice, and such inventions as this of Mr. Whittlesey's cause the originators to be classed among the workman's benefactors.

The following illustrations explain the idea.

Fig. 1 shows the seat.

Fig. 2 shows it fastened to the foot.

—(*Gardener's Monthly, American*.)



Fig. 1.



Fig. 2.

VENTILATING.

I HAD a bricked dung-pit 10 feet long, 6 wide, and 3 deep; it was emptied out, and a glazed span-roof put on it; it runs east and west, so that the south side receives most of the sun. There is no upright side glass, but the roof consists of four sashes, two on the north side and two on the south. Either sash can fold back on its neighbour, and must be folded back for any one to get into the pit, there being no other entrance. When any sash is lifted it affords ventilation at the side, at top, and at bottom; when all four are tilted with a chock of wood it is as if the roof were off, except in the centre of each side of the span, where the sashes are hinged to work on. The pit is sunk and unpaved; it is damp; a number of Camellias and Azaleas have set their buds well in it. The south side of the span is all rough plate; the two ends are filled in with clear glass. After two o'clock some large trees keep the sun from the pit. Each sash is now tilted a foot, and the air travels freely through the

plants; there is no other ventilation. Will the Camellias do in the pit throughout the summer, or must they go under a north wall? At what time on a hot day should they be syringed? I could put tiffany over the east end and over the rough plate at the south side if necessary. I like the pit. Some of the Camellias and Azaleas are large plants, and they are protected from high wind and heavy rain where they are; and I fancy the new growth would ripen well there.—J. A. J., Croydon.

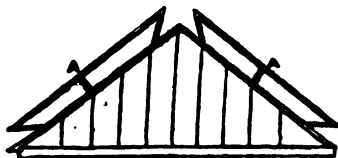


Fig. 1 shows the east end, one sash on the south side, and one on the north side, being tilted. A A are two chocks, which tilt the sashes. The sashes are hinged on the other side.

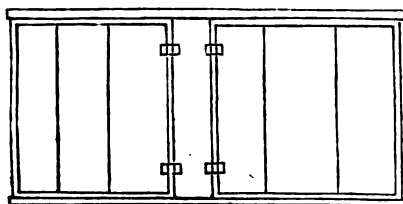


Fig. 2.—South side of span. The sashes, lifting on hinges, give ventilation at top, bottom, and ends.

[We think your plan of ventilation is simple as well as ingenious, and have no doubt it answers perfectly. If you can spare the room, the Camellias and Azaleas will do better there than under the north side of a wall exposed. We would syringe chiefly night and morning. If you do so during the day the ends of common glass should be shaded whilst the sun is full on them. We have no doubt your plants will flourish admirably and be more healthy than when turned out of doors. Many of us are obliged to do so because the place will not hold them in summer and flowering plants too. Give plenty of air, less moisture, and less shading as autumn approaches. There will be something on the subject in *Doings of the Week* before long.]

PROPAGATION OF THE GOOSEBERRY SAWFLY.

In June last I fed up a number of Gooseberry caterpillars till they passed down into the earth to enter the chrysalis state. As soon as they had spun their cocoons I brought them up and laid them out under glass on a sheet of paper.

The first fly emerged on July 7th, and within a few hours of its birth deposited sixty-eight eggs. These eggs were developed into live larvae on July 12th. Now that a solitary fly—excluded from all others from the moment of birth—should lay eggs from which proceed perfect caterpillars is indeed a mystery; and I should like to know whether the law of parthenogenesis prevails here.—R. S.

CULTURE OF THE SOIL OF PERU.

THIS is the main, and morally, far the most salutary source of the future wealth of Peru, although as yet it has yielded very small results.

We say nothing in this brief sketch of the high table lands between the eastern and western ranges of the Andes—a space of about one hundred miles in width, and from three to fourteen thousand feet above the ocean level. Some of it is very fertile. But we pass to that Eden of the world, called Montana, lying east of the Andes and rolling away in an inclined plain of hills and slopes to the great prairies beyond the Ucayali river. This name Montana in Spanish does not mean a mountainous, but a wooded or bushy country—a

country covered with clumps of trees or bushes. It is a rolling, farming, feasible, most fertile region, about one hundred miles wide, and the Peruvian portion of it about six hundred long, bounded on the west by the Andes, and on the east by the vast plains beyond the Ucayali, which stretch away to the Brazilian mountains. Of the exuberant fertility of this region I quote three authorities:—

1. Senor Raimondy, a Peruvian of education, who has made extensive explorations under the Peruvian government. He says:—"No words can give an idea of the immense variety of natural productions, and of the incessant activity of Nature in unfolding her creations. In truth, throughout this region are united all the conditions most favourable for vegetable life; such as an atmosphere constantly charged with moisture, a temperature sufficiently elevated, and a rich virgin soil. In every direction there is presented to the eye an exuberance of life so great, that every material object seems to be animated."

2. Dr. Lyman thus sums up its fruits: "Nearly all the tropical productions of the globe are found there. Chief among them are Cotton, Coffee, Sugar-cane, Rice, Tobacco, Cocoa (the Chocolate tree), Indigo, with corn (Barley and Wheat), on the uplands." It should be added, all the fruit of temperate climates can be raised on the highlands. "The forests abound in the various dye-woods of commerce; in ebony and many other kinds of wood valuable for cabinet work, the veneers from which present many beautiful combinations and contrasts of colours. Trees and shrubs possessing medicinal and other desirable virtues, such as Peruvian bark, various balsams, Sarsaparilla, Vanilla, India-rubber, Gum copal, and many others are thrown together in the wildest profusion. . . . Cotton grows wild, and is both white and yellow, the latter resembling the Chinese variety, called "Nankeen." The staple is finer than our ordinary production, and second only to the "Sea Island." There is a species known as "hill cotton," the product of a large tree, that bears it in great abundance. This is also of two colours, yellow, and white as snow. It has the softness and gloss of silk. Another production called by the natives "vegetable wool," is yielded in large quantities by a variety of Cactus. It is somewhat like the yellow cotton, but slightly crisp. Several heavy bales of this were recently noticed by the writer on board the steamer from Lima to England, to be experimented on by the cloth manufacturers. The Coffee tree is indigenous in the Montana. When cultivated it bears in three years, and each plant is calculated to produce a crop of at least a bushel of berries. Its quality and aroma are equal to those of the finest Mocha. The Sugar-cane, once set, lasts for a generation. Within six months from the planting, the canes are ready to cut. They are large and more juicy than ours, and each plant yields from sixteen to twenty fully matured stalks. Corn and rice mature in four months, and on the ingathering of the crop the ground is ready for another planting, bearing three crops a-year. "In fact," says a Peruvian officer, long resident in Huanuco, "the fertility of the soil is so great that it is only necessary to burn off the weeds and brush in any place, and then to scratch in the seed, to receive in due time a most abundant harvest." The quality of the tobacco is said to be equal to the best of Cuba.

For the common people of tropical America, farina and Bananas are the main reliance for food, and are as important to them as rice to the natives of India. The Banana is everywhere abundant. "The clusters are of monstrous size,"—in one instance "weighing 159 lbs." The farina, made of different species of the *Manihot*, is as valuable to the native as the Potato to the Irish, and, in yield, far more abundant. Grapes are abundant, and the Peruvian vintage will yet, doubtless, be very important to commerce. There are also, native to this region, Oranges, Citrons, Nectarines, Avocado Pears, Pomegranates, the refreshing Grenadilla, which is the fruit of the Passion-flower, the Cherimoyer, which not unfrequently here weighs 15 or 20 lbs., while in other countries it rarely exceeds 4 lbs.; and a bush called "huaco," a decoction of the leaves of which is said to be a remedy for acute rheumatism and an antidote to the poison of the most venomous reptiles.

3. Thaddeus Hainke observes: "Of the Indigo there is no end. I can say the same of Cotton and Rice. The precious balsam of copaiva, the Sarsaparilla, the Gum-elastic,

and the most fragrant species of Vanilla are all produced in an extraordinary abundance in these regions. The mighty forests, like the shores of the rivers, abound in the finest timber for all uses, especially for ship-building, and in trees distilling the most aromatic and medicinal Gums. There is a species of Cinnamon, which only differs in the thickness of the bark and its darker colour from that found in the East Indies, and which is as fragrant as the Clove.—(*Christian World*.)

ENTOMOLOGICAL SOCIETY'S MEETING.

THE July meeting of the Entomological Society, in the absence of the President, was presided over by A. R. Wallace, Esq., Vice-President. The meeting was almost entirely occupied with discussions relative to the economy of the hive Bee and common Wasps.

Mr. Tegetmeier exhibited a frame taken from a bar-hive unoccupied by Bees, in which was a quantity of old honey-comb which had been cleaned out by the Bees of an adjacent hive, which had also carefully secured it from falling by attaching a quantity of new wax along the upper edge and sides. This took place about the middle of the month of May, which it will be remembered was very hot and well adapted for bringing out fully the economy of the hive. Mr. Tegetmeier was of opinion that this cleaning and carefully supporting the comb in an empty hive was preliminary to a swarm from the adjacent hive taking possession in a few days of the empty one, thus leading to the idea that it was the swarms of workers (which had already made choice of a new domicile), which led the queen, whilst in the act of swarming, to the spot already fixed upon, and not, as was generally supposed, that the queen fixed upon and led the swarm to a new spot. The cold weather which set in within a few days afterwards, put a stop to all swarming at the time, and the hive consequently continued empty. The fact, well known to bee-keepers, that Bees in swarming will by preference resort to a hive in which comb is already fixed, confirms Mr. Tegetmeier's observations to a certain extent, and it is even popularly considered to be a felony to place such a hive in the vicinity of a neighbouring bee-keeper's bee-house at the time of swarming. Mr. Tegetmeier also exhibited a number of specimens of comb of the Honey Bee, showing some singular abnormal variations in the form of the cells. He observed that the cell of the hive Bee was invariably commenced as a hemispherical cup, and that a section of a cell which was not in immediate contact with other cells was always circular; that the hexagonal form was not the result of instinct on the part of the Bee, but was simply necessitated by a cell being surrounded by six other cells of equal size with it, the enlargement of the central cells being carried to its fullest extent until each of the six sides assumed a flattened form.

Mr. F. Smith objected again, as he had already done on several previous occasions, to this view of the subject, contending that the hexagonal form was the result of instinct on the part of the Bee, and that the theory was opposed by the fact, that the base of the truly hexagonal cells of the common Wasp was flat. Mr. Smith also read a communication from Mr. S. Stone, explaining the manner by which he had induced a small colony of *Vespa germanica*, in the months of August and September last, to construct the remarkable series of nests exhibited by him at the preceding meeting of the Society. The Wasps were placed in a box with an aperture for ingress and egress, and pieces of wire with bits of guide-comb were fixed in various directions to which the Wasps attached their structures in different fantastical forms, being driven from the box as soon as the cells were made, and before any eggs were deposited, into another box in which they repeated their operations.

Mr. Stainton exhibited a new British Microlepidopterous insect belonging to the genus *Gelechia* allied to *G. nigricostella*, for which he proposed the specific name of *Gelechia Lathyri*, the species having been reared from larvae found feeding upon *Lathyrus pratensis*, by Mr. Brown, of Cambridge.

Professor Westwood stated that he had succeeded in rearing *Pyralis farinalis* from the larvæ found in vast profusion in a bin of bran, by Captain Cox.

A paper by Mr. Rowland Trimen containing descriptions

of fifteen new species of Butterflies, from South Africa, was read.

The first Number of a new volume of the Society's "Transactions" was announced as just published, containing Major Parry's monograph on the family Lucanidae, with twelve plates. Amongst the donations to the library received since the last meeting were the publications of the Royal and Linnean Societies, the Society of Arts, the Royal Academy of Munich, the Entomological Societies of Russia and Stettin, the "Journal of Entomology," the "Entomologist," the "Entomologist's Monthly Magazine," Mr. Wollaston's elaborate volume on the Coleoptera of the Canary Islands, the beautiful work on exotic Lepidoptera, by Mr. Hewitson, and a remarkable Memoir on Bat-parasites of the group *Nycteribia*, treated as a distinct family, by Dr. Kolenati.

WORK FOR THE WEEK.

KITCHEN GARDEN.

AN unquestionable advantage attends the practice of constantly keeping the surface of the ground loose and open about the growing crops, and this recommendation is more particularly applicable to stiff loamy garden lands. From inattention to this apparently simple matter, it is evident that both the absorption and evaporation of moisture must be impeded, and thus the advantage of atmospheric influence considerably diminished. The fork at this moment, for the purpose above mentioned, and the complete extirpation of weeds, should be constantly employed. The decline of some of the earlier quarters of Peas, Cauliflowers, Beans, and Spinach will afford the opportunity of making further additions to the stock of Broccoli, or of planting a main crop of Coleworts. Broccoli, if there is any spare ground, plant out the latest-sown Miller's Dwarf Russian. The Broccoli intended to stand through the winter should never be planted too thickly, as it is then apt to be more tender than when there is a good circulation of air amongst the plants, which makes them robust and hardy. Move the earth well amongst the growing crops of Broccoli and winter stuff, and if the earth must be laid against the stems let it be done right and left with a fork, keeping the work before you to avoid treading on the surface. Cabbages, there should be no delay in getting in the main sowings for spring supply. Bailey's Improved is an excellent variety, to which may be added the Nonpareil, Vanack, East Ham, and the London Market. The first sowings may be pricked out into nursery-beds; it is always better to do so in preference to leaving them in the seed-beds, as it makes them stocky and well rooted, and, consequently, better able to withstand the winter. Celery, see that it has the surface soil well stirred about it, and give copious applications of liquid manure, with a small portion of salt dissolved in it. Peas, the rows that have had crops planted between them must now be entirely removed, and the ground well forked-up. Get ready a piece of ground for winter Spinach, also for winter Onions, and Bath Cos Lettuce. It should be remembered that the present is the most important period of the year for completing arrangements for the due supply of vegetables throughout the winter and spring.

FRUIT GARDEN.

Keep the shoots of Apricots, Plums, &c., closely nailed to the wall, and afford the fruit as fair an opportunity of exposure as possible. Trap earwigs and ants about Apricot trees. See to the speedy formation of Strawberry-beds. Examine the ligatures of stocks budded in July. Budding may still be performed.

FLOWER GARDEN.

Go over the flower-beds frequently, and remedy any defect that may be perceptible without loss of time; for the bedding-out plants are enjoyed but for a comparatively short season, and now that they are in beauty every means should be used to render them as effective as possible by maintaining the most perfect order and neatness. Where the stock is clean and growing vigorously this will involve considerable labour, and it will be necessary to go over the beds frequently, pegging down where necessary, and cutting back such of the shoots as may incline to encroach on the edgings of the beds. Take advantage of leisure hours to put in cut-

tings, and use every possible dispatch with this work until there is a good stock in a fair way for rooting of such things as are known to be difficult to winter, except in the shape of well-established plants. The earlier kinds of Roses, done flowering, should have all their decaying blossoms removed. Budding this fine family should now be expedited. Where the bark rises badly some manure water should be applied previously, this will cause the sap to flow more readily. Now that the effect of the present arrangement of the colours in the beds can be fairly seen, there is an excellent opportunity for noticing any mistakes, and determining upon the arrangement for next season, and this should be done without delay. Take care that Carnations and Picotees do not suffer from drought. Layering may be commenced with those shoots sufficiently long. Plant-out Pink pipings. Give Dahlias and Hollyhocks abundance of water; tie-out the branches and disbud the former where required, and shorten the flowering stems of the latter. Collect annual seeds.

GREENHOUSE AND CONSERVATORY.

Now that there is a profusion of flowers out of doors, it will not be possible to maintain the interest of the conservatory except by keeping it furnished with handsome specimens of showy plants in first-rate condition. Nothing, therefore, should be brought here at present that is not a fair specimen, and well bloomed, nor should a single plant be allowed to remain a day after it begins to get shabby. It is not desirable to crowd the house with flowering plants, but the aim should rather be to have a moderate number of handsome specimens effectively arranged, which, while flowers are so plentiful out of doors, will be vastly more interesting and pleasing than a large amount of floral display from plants of no individual interest or merit. Remove the flowers of *Aphelaxis* and *Helichrysums*, cutting the flower-stems close to the old wood, and after cleaning the plants, set them in a cool, shady place when they begin to grow. Such as require it may be repotted. *Kalosanthes*, the flowers of which are getting shabby, should be cut in. Do not spare the knife on the blooming shoots, but cut them well in below the blooming branches of next year, and where necessary remove two or three tiers of leaves at the top of each branch. Repot such plants as require it, using a tolerably rich, porous soil. Attention must now be paid to late-growing plants in borders, for while in active growth they require a good deal of water. See that large specimens of *Camellias* are not allowed to get too dry at the root after they have set their buds, for shedding the latter is often due to this cause. *Cinerarias* for early flowering should now be growing freely, and should be shifted when necessary, for if they are to form large specimens for flowering in winter, they must not be permitted to sustain any check.

STOVE.

Such of the inmates here as are intended for the decoration of the conservatory in autumn and early winter, should be carefully looked over, shifting those which are likely to want more pot room, so as to get the pots well filled with roots before their flowering season. Also, keep the shoots tied out rather thinly, and expose the plants to as much sunshine as they will bear without their foliage being scorched. Those *Ixoras* which have done blooming must be cut boldly in and started gently to make a new growth. Complete as far as possible the shifting or replacing of *Orchids*. The *Cypripediums* and the old *Phaius* should now be induced to complete their growth, by proper assistance, especially those required to bloom in the dead of winter. The young reserve stock for filling blanks in the stove should be encouraged by progressive potting, and a warm equable temperature. *Gesnera zebrina*, *Plumbago rosea*, and *Torenia asiatica*, will amply repay attention bestowed on their culture. Decayed leaves, with a mixture of sharp sand, form a compost peculiarly suitable for the first-named plant.

W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

The rain of July 17th, mentioned in our last, was soon evaporated. Many an anxious eye has been directed to the

atmosphere; and the shifting of the wind and the movements of the barometer have been carefully watched. We have dug down lots of Strawberries that fruited early, and made ground occupied by early Peas ready for winter stuff, and never saw the soil so dry before. It is vain to think of planting until rain come, as now we have not a drop of water to give. We have just a little left for plants and fruit trees in pots. The water-question has been a serious one with us for these two summers and makes pot culture a difficult matter. Without our sewage from the mansion we could not have got along this year. As yet we have managed pretty well, and if we only had a nice rain we should do pretty well, for the nights becoming cooler after August, we obtain a plentiful deposition of dew.

What we said last week about choosing the site of a garden, ought to have equal or still greater weight as to the position of new cottages for working men as regards water supply. It is sad to see the scanty wages of labourers broken in upon by purchasing water at a halfpenny or a penny the pail. It is still sadder to see a woman skimming with a saucer the surface of an almost dried-up putrid pool, and then when that settles an hour pouring off the surface again either to drink or make her favourite cup of tea. No wonder that wens and thick necks prevail in some districts. Many of those privileged with abundance of clean water little think of the obligations they owe to the benevolent landlords who make water the primary consideration when building a block of cottages. We could name many hamlets and villages the inhabitants of which either have no well or tank, or no right to go to one which is private property. The ditch and the pool formed by rains that previously wash the highway are almost the only supply, and when these fail the water-cart man must supply them from a distance at so much a pail. Need we wonder that the want of physical cleanliness in such circumstances is too often associated with moral impurity?

We could do little but lessen evaporation by keeping the hoe going, moving the surface among all growing crops, and mulching those farther advanced. We have shaded *Celery* with branches until we are able to water it. But for this we should have expected our earliest to have bolted.

FRUIT GARDEN.

The chief features have been getting every little drop of water we could to give a help to swelling fruit. Figs and Peaches especially require it. We should have liked to have syringed the latter more, but our water is scarcely clean enough, what little is left of it. We have potted a good portion of our Strawberries for forcing, and in the manner detailed last season. Melons we have shaded a little, especially when nearly ripe, and it lessened the necessity for watering in the case of those growing freely; otherwise we like to dispense with all shading, except just in sudden extremes from very dull to very bright. This is a matter of more consequence than is generally imagined. Some people shade when the sun is powerful, but the shading remains on when the day has become cloudy, instead of being at once removed. For all fruit when flavour is an object, sun is of primary importance. It is even more essential than abundance of air. Air-giving early does away with the necessity for opening a house all over. Where heat also is required there can be no question as to the economy of making the sun do as much of the heating as possible. We have had and have heavy crops of fine-flavoured Grapes, and the only air given to them has been by small openings near the top of the back wall. Not a front sash has yet been opened. In some of the hottest days a little water was sprinkled on the floors and stages just to prevent overdrying. The air at the back has not been wholly taken away for some two months past. The house, therefore, heats gradually, and any moist vapour has room enough to escape. Whenever Grapes are dewed naturally in a vinery, it will be in a morning, and owing to air being given too late. It is not likely we will give any front air until autumn, when we want to keep the Grapes cool after they are ripe.

We have also for some time given air back and front to a Fig-house, as the fruit when fully ripe, as it should be when sent to table from a private establishment, is apt to get mouldy in a confined atmosphere. Here, just now, we are obliged to make a compromise. This body of air and cool-

ness is just the thing for all that remains of the first crop, and especially after a watering at the roots, whilst a higher temperature and a closer atmosphere would be better for the second crop now growing and swelling, and without this much of this crop will not ripen soon enough to be distinguished for flavour. Figs in general have little flavour after the middle of October. In a bright November we have had them very tolerable, and sometimes we have had Strawberries good in that month from late pots, but in dark weather they were not worth eating.

Here we must note, though scarcely in the right place, that the *gum* in Cucumbers appeared in three lights in a pit. We cleaned the few plants that were affected, and washed them with clear sulphur water, and soot water, and will see what they will do. We might have pulled them out, as we have plenty of others coming on, and looking all right. The three lights had produced in great abundance fine long fruit of the Volunteer kind; but we have not been able to get a chubby-pointed one, and therefore have not one seed. We would not save from the three lights now, even if the disease appeared no more. This small bed has done quite enough of work; and perhaps it would have been as well to have pulled up the plants, cleared the pit, given fresh soil, and planted again; but if we only could cure this evil we might also be able to prevent it. As yet we know of no remedy when it appears, except fresh soil and frequent planting. In the days of old we once had a fine Cucumber plant, in a large pot, some three years of age; but for some time past we rarely get one set of plants to last out the season, from spring to autumn. We are gratified that so many expressed their approval of what was previously advanced on this subject. After much consideration, we could not but candidly own that we were ignorant alike of the cause or the cure of the evil.

We think we have mislaid an inquiry about Fig trees showing young fruit now in an orchard-house—"Whether they would be ripened in such a place in the autumn; and, if not, whether it would not be best at once to remove them?" They will not ripen unless the airy house is kept closer and warmer, by sun heat, if nothing else. That is a general answer. If September and October be bright, they will have a good chance to ripen pretty well. We would advise, at least, giving them the opportunity, and then you will lose nothing. If at last you see they will do no good, cut off all the fruit, within the sixteenth of an inch of the stem. It would be no use leaving them over the winter, unless you gave the plants heat enough to keep the leaves green. Even then you would not gain much, as your first crop of next season would be poor. Figs larger than a Marrowfat Pea rarely pass the winter well in a cool house, or out of doors. We prefer resting the trees in winter, by coolness and comparative dryness at the roots, and then starting them afresh. Then, from the time of breaking bud and showing fruit, the roots should never be dry, and never in stagnant water. Attend to these conditions, and give little soil to the roots to feed in, and it matters little about pinching, stopping, pruning, tying, or training; the plants cannot help being fruitful, if at all free-fruiting kinds.

ORNAMENTAL DEPARTMENT.

Much the same as last week as to regulating, potting, and watering stove and greenhouse plants; but the chief work has been dressing the flower-beds, not only to cause the plants to look their best, but to make them fully cover the beds, so as not to let the sun's rays to the soil. Our principal beds have been well filled since the first week in July—those of *Calceolarias* especially so, and they generally do very well here. We have had to watch them narrowly to prevent them dying from drought, and though we administered a little drop of water to a sinking plant we have had to replace several dozens out of our small reserve. Without rain splendid beds and rows must go, as we cannot treat them much longer even homoeopathically with water, and can scarcely do anything more in the way of mulching, as the tops are too thick to admit of its getting down to the bottom of the stems, and too much of it would injure them if much wet came. Last season rain fell when we were in a similar fix, and the *Calceolarias* kept fine until destroyed by frost. The dread of the chief attractions in the garden being destroyed by drought becomes a source of worry, however, and

we should almost feel disposed to employ more *Geraniums* with variegated foliage and fine blooms. When once established the fiercest sun does little to injure them if they have a depth of soil to root in. Even after all the drought we have removed some of the larger leaves to give more light and air to the flower-trusses. We have some rows of *Stella* now magnificent, with their huge corymbs of bloom. We have seen none of the new kinds, even of our old friend Mr. Beaton's, to equal this *Stella* of his, which, strange to say, he himself hardly thought second-rate.

We are glad that the propagation of *Geraniums* is now receiving attention, as we always make cuttings late, because we wish our beds to be at their very best all through the autumn, and even then our cuttings must be small, as we generally give each about one square inch to itself, and it gets no more until spring. As far as we recollect, these fine plants of *Stella* were taken as cuttings in September. Now, however, is a better time every way.

We forgot to mention that about ten days ago, we put a string of *Cerastium tomentosum* round our main ribbon-border. It is straight, and planted in straight rows, thus—back row, *Trentham Rose Geranium*; 2, *Chinese White Daisy*; 3, *Perilla nankinensis*; 4, *Calceolaria amplexicaulis*; 5, *Stella Geranium*; 6, *Prince of Orange Calceolaria*; 7, dwarf blue *Ageratum*, a great acquisition, especially from cuttings; 8, *Brilliant Geranium*; then grass verge and gravel. *Brilliant* is well enough, but the jutting in and out of the foliage did not chime in exactly with the straight line, of the verge and walk. The line, thickly planted with small plants of *Cerastium* about 3 inches from the verge, just supplies the deficiency.—R. F.

COVENT GARDEN MARKET.—JULY 30.

The supply continues good, and so is the demand for this period of the season. Pines, Grapes, Peaches, Nectarines, and Gooseberries, are plentiful. Strawberries are now nearly over. Importations from abroad are kept up, and now include Filberts, which bring from 9d. to 1s. per pound. Of Jargonelle Pears from the continent and Channel Islands there is also a good supply. They may be had at from 1s. 6d. to 4s. per half sieve. West Indian Pine Apples are abundant, and very cheap; Currants of all kinds are plentiful, and, from the dry weather, in excellent condition for preserving.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples.....	$\frac{1}{2}$ sieve	1	0	to 1 6	Mulberries.....	quart	0	0	to 0
Apricots.....	dox.	1	0	3	Nectarines.....	doz.	8	0	15
Cherries.....	lb.	0	6	1 6	Oranges.....	100	12	0	30
Currants, Red.....	$\frac{1}{2}$ sieve	2	0	4 0	Peaches.....	dox.	12	0	30
Black.....	do.	4	0	5 0	Pears (kitchen).....	bush.	0	0	0
Figs.....	dox.	4	0	8 0	dessert.....	dox.	2	0	3 0
Filberts & Nuts 100 lbs.	0	0	0	0 0	Pine Apples.....	lb.	3	0	6
Gooseberries.....	$\frac{1}{2}$ sieve	1	0	3 0	Plums.....	$\frac{1}{2}$ sieve	4	0	7 0
Grapes, Hamburgs lb.	2	0	5	0	Quinces.....	do.	0	0	0
Muscats.....	dox.	4	0	8 0	Raspberries.....	lb.	0	4	0 8
Lemons.....	100	4	0	10 0	Strawberries.....	punnet	0	6	1 6
Melons.....	each	2	6	5 0	Walnuts.....	bush.	14	0	30

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.	
Artichokes.....	each	0	4	0	6	Leeks.....	bunch	0	4	0
Asparagus.....	bundle	0	0	0	0	Lettuce.....	score	0	9	1
Beans Broad.....	½ sieve	1	6	0	0	Mushrooms.....	pottle	1	0	2
Kidney.....	½ sieve	2	0	3	0	Must. & Cress, punnet	0	2	0	4
Beet, Red.....	doz.	1	0	3	0	Onions.....	bunch	0	4	0
Broccoli.....	bundle	0	0	0	0	pickling.....	quart	0	6	0
Brussels Sprouts.....	½ sieve	0	0	0	0	Parley.....	½ sieve	1	0	1
Cabbage.....	doz.	0	9	1	6	Parsnips.....	doz.	0	9	1
Capicums.....	100	0	0	0	0	Peas.....	quart	0	6	1
Carrots.....	bunch	0	5	0	8	.....	bushel	2	0	5
Cauliflower.....	doz.	2	0	4	0	Potatoes.....	each	8	0	12
Celery.....	bundle	1	0	2	0	New.....	bushel	3	0	4
Cucumbers.....	each	0	6	1	0	Radishes.....	dox. bunches	0	0	0
pickling.....	doz.	0	0	0	0	Rhubarb.....	bundle	0	0	0
Endive.....	score	1	3	2	6	Savoy.....	dox.	0	0	0
Fennel.....	bunch	0	3	0	0	Sea-kale.....	basket	0	0	0
Garlic and Shallots, lb.	0	8	0	0	0	Spinach.....	sieve	2	0	4
Gourds & Pumpks, each	0	0	0	0	0	Tomatoes.....	doz.	1	0	3
Herbs.....	bunch	0	3	0	0	Turnips.....	bunch	0	4	0
Horseradish.....	bundle	1	6	4	0	Vegetable Marrows.....	doz.	1	0	2

TRADE CATALOGUES RECEIVED.

John Foulds, Hullard Hall, Stretford New Road, Manchester.—*Catalogue of Chrysanthemums, Dahlias, Geraniums, &c.*
William Dillistone, Munro Nursery, Sible Hedingham, Essex.—*Catalogue of Choice New Plants of 1864.*

TO CORRESPONDENTS.

•• We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

MELONS CRACKING (C. P.).—If we read your letter aright, we can readily explain why your Melons crack. There is a word in your letter which may either be met or heat at night, and whichever it is the atmosphere of the place in which the Melons are growing will be affected. Heat should be applied during the day; and if given at all at night much less will be required than during the day, and a little air should be left on at night. There should be at least 10° difference in cloudy weather, and 15° to 25° in sunny, between the day and night temperatures. If you cover the lights with mats, that will also create a confined moist atmosphere and too high a temperature by night, and cracking will be the consequence. Leave a little air on at night, fire briskly in the day, giving at the same time abundance of air, and keep the fire low by night, or allow it to go out if the thermometer does not sink below 65°. You ought to have given water more copiously at an earlier stage, and not allowed the plants to be without it for weeks.

STRAWBERRY BEDS (W. W.).—Your soil will not do for Mushrooms. They grow best in moderately light rich turfy loam. The best time to make Strawberry beds is as early in August as the runners can be had for planting, or in March. As your old beds bloom and set well, we think you will do wrong if you shift the plants, especially as they will never do much good afterwards. Old plants are only fit for the rubbish heap. We advise you to manure well in autumn, and to point it neatly in between the rows with a fork in March. When the Strawberries are in bloom water freely between the rows, give a drenching of water after setting, and mulch between the rows with short grass, or, better still, clean straw. If any difficulty be experienced in watering make holes in the sloping bank, and fill them with water, closing them again after the water has sunk into the ground. If these means be adopted we expect that your beds will bear well next year. In making new beds dig the ground deeply or rather trench it 2 feet deep, and then work in a good dressing of manure. As your soil is clay it will not require treading, and it ought to give you good crops; but if it were light it should be well trodden down for Strawberries like a firm moderately rich soil.

TERMS ON VINES (A Subscriber).—You have no remedy but to smoke the house with tobacco. Tobacco smoke will not injure the Grapes in the least if the tobacco paper be of good quality; but to make sure, we advise you to employ shag tobacco, and to smoke moderately two nights consecutively, rather than fumigate strongly on one night only. Cucumbers to fruit at Christmas should be sown in the second week in August, the seedlings being duly potted, and planted in their final or fruiting quarters by the middle of September.

ROSES (Agnes).—After blooming cut the shoots back to six or eight leaves, and this makes compact heads. Bialri No. 2, Brennus, and Madame Despres are better adapted for pillars than standards, as their habit is so vigorous. By summer pruning they may be kept within bounds, stopping the shoots to eight eyes, but only once during the summer, and that immediately after blooming, or by the middle of July. Give the Geranium cutting in pots abundance of water, and the sun shining on the pots will do good instead of harm.

MIMULUS (Mauclaine).—There are now many varieties much resembling that which you sent in colour and markings, and which did not appear sufficiently striking. Doubtless, however, from the circumstances you name, and long carriage, the beauty of the flower was much deteriorated.

TULIP COMPOST (S. A. M.).—We have found the following the best of all composts for florists' flowers, and Tulips in particular. Take turves from a rich pasture, cut 3 inches thick, lay them in a heap for twelve months, turn them over twice, sprinkling a bushel of soot at each turning to every cart-load, and add one-third sheep manure at the second turning, or, if that cannot be had, hotbed, or other well decomposed manure may be substituted. The main point in growing Tulips is to prevent stagnant water lodging in the soil under the bulbs; otherwise, give them what kind of compost or treatment you may, they never bloom satisfactorily. If the loam be heavy a little sand may be added to keep it open; yet Tulips flourish in a rich, deep, and moderately strong loamy soil.

CUCUMBERS DYING (Idem).—We think the Cucumbers are not healthy at the roots, and that both the top and bottom heat is too low. Try to encourage vigorous root-action by a little warmth, keep the atmosphere moist, the soil damp, and air on at all favourable occasions. If they have been in bearing some time remove a few inches of the old soil and add fresh, laying in the young shoots, which will root into the new soil and reinvigorate the plants.

FIVE APPLE SCALE (An Old Subscriber).—If you had sent a few insects we would have known whether it was the white scale or not. It is difficult to destroy, and if you have only a few plants, the best plan would be, to get rid of them, clean all the places thoroughly, and begin with fresh stock. We have always found the simplest plan was to grow the plants in fresh dung heat, as flies will bear the fumes from fresh dung which would kill most other plants outright. This will settle those above ground, but will not dispose of those under the soil, hence the difficulty of the cure.

UNBLOVED ORDER (A Gentleman's Gardener in Kent).—There must be some mistake we should think, but we cannot interfere in such matters.

VINES (An Anxious Inquirer).—We think you are quite right in not acting upon the advice of those who do not feel themselves responsible for the results. Hear what they have to say, but use your own judgment. Your Vines, pruned seven years on the spur system, will not need the spurs to be brought nearer the rod if they have been properly pruned each year to one or two eyes at the most. They produce good crops of Grapes. What more can you wish for? We advise you to let well alone, and to be content with the Vines as they are, so long as they continue to bear well. We have some now that have spurs over 1 foot long, and though a little unsightly, as you say, some of the Vines are producing upwards of thirty bunches on 20 feet of rafter, and the bunches will weigh between 2 and 3 lbs. each. If you cut the spurs close to the rod shoots will proceed from the dormant eyes situated upon it, and these may show fruit sufficient for a crop, but the chances are two to one that they will not. We do not recommend that practice, but would prefer bringing up a young cane from the bottom, and letting it bear on one-third its length in the following season, cutting off one-third the spurs of the old rod, and so on year after year until the old rod be done away with. By this plan you will improve the appearance of the Vines, but we question whether they will be improved in bearing, though they may if old. For general vinerias we prefer the spur system; but long and short rod also answer well. If there be any difference between one system of pruning and another, the long rod system gives the largest bunches; but what is gained in size of bunch is often lost in flavour, spurs very often giving more compact bunches, more even berries, and better-flavoured fruit.

PAULOWNIA IMPERIALIS (Laurus).—It belongs to the natural order Scrophulariaceae, and is a native of Japan. The common Laurel is *Cerasus laurocerasus*; the Portugal Laurel *Cerasus lusitanica*.

LAWN SOWING (E. A. P.).—The beginning of April is the best time to sow lawn grass seeds; but you may, if the ground be clean and in good heart, take up the Potatoes, and sow the seeds at once. They will not, however, make much show this year; and unless the land be free from all kinds of perennial weeds, we would not advise you to take up the Potatoes, but let them come to maturity. By deferring the sowing until spring your opportunities of clearing the ground will be greater, and the sward will form all the better in consequence of the soil having been exposed to a winter's frost. If any levelling be required it should be done before the seed is sown. All things considered, we should defer sowing until the spring, though we have no fear of the grasses being injured if sown in August or September. For an acre of medium soil—that is, neither strong nor light, we recommend *Festuca ovina* (Sheep's Fescue), 5 lbs.; *Cynosurus cristatus* (Crested Dog's-tail), 6 lbs.; *Festuca duriancula* (Hard Fescue), 4 lbs.; *Lolium perenne tenue*, 18 lbs.; *Poa nemoralis*, 1 lb.; *Poa trivialis*, 1½ lb.; *Poa sempervirens*, 2 lbs.; *Trifolium repens*, 6 lbs.; and *Trifolium minus*, 3 lbs., or 46½ lbs. in all. If the soil is light substitute 1 lb. of *Avena flavescens*, and have 1 lb. less of Crested Dog's-tail; if heavy, add another pound of the last, omitting one pound of *Trifolium minus*. We know of no means of preventing the footstalk coming off in skeletonising, except extra care.

BOOKS (C. M. W.).—We know of no such work. (L. M. N.).—"Window Gardening," which you can have free by post by sending your address and ten postage stamps.

AMMONIACAL LIQUOR (H.).—You may saturate with the gas ammoniacal liquor as you say, the ground from which a crop has just been cleared away, for the purpose of destroying grubs, &c., and if the ground be immediately dug another crop might be inserted safely after the lapse of two days. We should not add house sewage for the purpose. It would be very bad practice to apply the ammoniacal liquor to plants in winter—they are at rest then, and would be injured by such stimulants.

NEW BOILER (A Young Gardener).—If you will send us a drawing we will give you our opinion upon it, and promise neither to publish it nor to print it.

FASTLY RASPBERRY (X. Y. Z.).—Three or four of the ripe fruit and leaves will be sufficient to send, stating the nature of your soil, and whereabouts is the garden.

CLAY SOIL (A Constant Reader).—You cannot do better than you propose to give the hungry clay a very heavy dressing of chalk and burnt clay. We should add a large quantity of sea sand. All these additions will tend to improve the soil's staple.

HAUTOBOIS.—I beg leave to state that Hautbois means High Wood, and not, as is stated at page 71, Deep Forest, or, in French, *Forêt profonde*.—H. KNIGHT, *Château de Pontchartrain, Seine et Oise*.

[We are obliged for the correction, but we can show authorities for *haut* being translated deep; and whether *bois* is rendered by wood or forest matters little. Accepting "High Wood" as the correct translation, it does not apply to the Strawberry under consideration.]

NAME OF CHERRY (M. Newman).—It is the Reine Hortense.

NAMES OF PLANTS (B. M.).—1, *Spiraea arifolia*; 2, *Erigeron glabellus*. Your Mignonette is most likely suffering from dryness at the root; if not you will probably find that some insect is the cause. (E. C. S.).—Looks like *Chelanthus alabamensis*, but the specimen is much too young to enable us to speak with certainty. (G. M.).—*Nepeta nepetella*. (F. S.).—*Oxalis incarnata*. (J. B.).—*Tamarix gallica*, or French Tamarisk.

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

POULTRY SHOWS.

AUGUST 2nd. NEWMILLERDAM. Secs., Mr. J. Turner, Walton, and Mr. W. Pashley, Newmillerdam.
AUGUST 13th. WAKFIELD AND WEST RIDING. Sec., Mr. J. Croland, jun. Thorne's Lane, Wakefield. Entries close August 4th.
AUGUST 17th. COTTINGHAM. Sec., Mr. Joseph Brittain.
AUGUST 18th. BURNLEY. Sec., Mr. E. Whittam. Entries close Aug. 6th.
AUGUST 22nd, 23rd, 24th, and 25th. ALEXANDRA PARK. Poultry, Pigeons, and Rabbits. Sec., Mr. William Houghton. Entries close July 23rd.
AUGUST 27th. HALIFAX AND CALDER VALE. Sec., Mr. W. Irvine, Holmfild, Ovenden, near Halifax.
AUGUST 30th. POCKLINGTON. Sec., Mr. T. Grant. Entries close Aug. 22nd.

August 30th. *PUDNEY. Sec., Mr. E. Sewall. Entries close August 27th.*
 August 31st. *DEWARBY. Sec., Mr. F. Aked.*
 September 7th and 8th. *MANCHESTER AND LIVERPOOL. Sec., Mr. T. B. Ryder, Church Street, Liverpool. Entries close August 6th.*
 October 1st, 3rd, and 4th. *ISLINGTON (AGRICULTURAL HALL.) Sec., Mr. J. Douglas. Entries close September 17th.*
 October 12th and 13th. *WORCESTER. Hon. Sec., Mr. J. Holland. Entries close September 29th.*
 November 28th, 29th, 30th, and December 1st. *BIRMINGHAM. Sec., Mr. J. B. Lythall, 13, Temple Street. Entries close November 1st.*

THE AGRICULTURAL HALL POULTRY SHOW AND THE POULTRY CLUB.

Nothing can be more fatal to the success of any undertaking than to raise questions, which, even if satisfactorily answered, may indirectly affect its stability. There is an old proverb about fools and wise men. We know that all persons listen eagerly to inquiries, and are rarely satisfied with the answers those inquiries elicit. This arises from the tendency of human nature to imagine evil, and the difficulty of expressing ourselves so that we may be understood by all.

The proposed show of poultry at the Agricultural Hall, Islington, has, unfortunately, fallen into the difficulty of having questions to answer, and explanations to make. Be they rightly or wrongly put, be they easy or difficult to dispose of, they will have the effect of alarming many. The agitation may be premature, but it has begun, and now there is no alternative but to ventilate the matter entirely, and to give the fullest and most complete answers.

None will doubt for a moment the propriety of the appointment of Mr. Hewitt as a judge. Some question seems to be raised as to the appointment of the other judges. It is hard to say that a judge should not be a breeder or an exhibitor; but it is beyond question that neither directly nor indirectly should a judge exhibit at a show where he is to adjudicate. We must leave the Poultry Club to act according to their judgment, and we must form our opinions by the results.

If the Show in question is to succeed it must be above suspicion, and beyond reproach. Shows will soon cease to be where men feel that they have no confidence, and do not get a fair field. That the Poultry Club in their management of this Show will maintain and enforce that honesty and fairness which is their guiding principle we have no right to doubt.

One cannot help suspecting some hostility to the principle of a poultry club to be lurking in some of the objections brought forward against the Show at the Agricultural Hall. I am inclined to look with favour on the principle. With regard to the existing Poultry Club I cannot say anything, as I do not know anything about it. Amateurs would be glad to know more of it and of its intentions; and most probably that knowledge would conduce to its welfare. A self-constituted and exclusive body cannot be tolerated, yet a poultry club is to be desired.

A poultry club constructed on the limited liability principle, having the proper organisation of directors, officers, and shareholders, might, by common consent, take into its hands the appointment of judges, or, at all events, for all shows that desired to have them so appointed. The Club might also undertake the formation and management of shows in neighbourhoods where they were desired, where a certain sum could be guaranteed, but where there was neither the knowledge nor energy to do the work.

General meetings of the Club should be held at all the principal shows in the kingdom: and it might be expedient to have a northern and a southern committee.

These are propositions which I would do my best to aid, and which I shall be glad to see carried out.—EGOMET.

HAD Mr. Tudman answered my communication himself, instead of delegating the duty to another, it would have been more satisfactory to me, and, I presume, to your general readers also. Why he has not done so is best known to himself. As respects the communication of his *locum tenens*, however, it has not mended the matter, notwithstanding the latter's attempt to raise a new issue on the character of those under whose auspices the doings of the Poultry Club have been ushered into public notice. 'Now, the "worthy Honorary Secretaries" and other officers may be all that he

contends for; they may be "gentlemen acting and giving their services for the benefit of the poultry-loving community," and be "purely honorary;" they may, as Shakespeare says, be "all, all honourable men;" but when your correspondent urges on the strength of this that "they are not public property to be reprimanded," &c., in other words, that they are above responsibility, I am persuaded I shall not stand alone in demurring to such an assumption. Persons who hold a public position, whether as honorary or paid officers, must submit to public criticism, and to winces under the ordeal is sure to awaken suspicion that all is not sound. Now, it cannot be denied that great soreness has been manifested by both of your correspondents; why, it is, perhaps, not for me to say. One thing, however, which is certain, is, that no assumption nor any amount of soreness can alter facts which are patent to all your readers.

The first of these facts is the correctness of your statement that Mr. Hewitt was appointed one of the judges in the forthcoming Islington Show; and after the evidence you adduced from the correspondence between that gentleman and Mr. Tudman, in which the latter offered, and the former accepted, the office, the genuineness of which has never been questioned, even by Mr. Tudman himself, the bold assertions of Mr. Tudman and his coadjutor "A POULTRY FANCIER" to the contrary can have no other effect, save that of throwing discredit on the other statements of the same parties. It is indeed truly amazing that any one in the face of evidence, such as that furnished by yourself, should have the hardihood to deny so palpable a fact.

The next is, that such offer was accompanied by the withdrawal of the conditions, to establish which, it would seem, is one of the principal objects contemplated in the formation of the Club, and that Mr. Hewitt's acceptance was the consequence, to use his own expression, of such "restrictions being withdrawn." Your correspondent waxes quite indignant at the bare intimation of the rules having been in any way compromised. "How your correspondent [viz., myself] could state that the rules of the Club have been sacrificed or broken down he (the POULTRY FANCIER) cannot conceive; for as yet," he adds, "they have been little acted upon, the test being yet to come." Now, how comes it that they have not been acted on? unless it is that judges of standing and character, like Mr. Hewitt, refuse to act under the restrictions attempted to be imposed by them. If this is not failure, and failure of no ordinary kind, I should like to be informed what is. It is the reference to this fact in your editorial remarks, which, in my opinion, is the gravamen of the offence, and the cause of the soreness felt by your correspondent; and that I, or any one else, should venture to submit that this involves the failure of the elaborate production is, of course, unpardonable in the eyes of so august a body—the more unpardonable on the ground of its truth.

Your correspondent, moreover, offers grave objections to the publication of the names of the judges, for the reason, as he says, that the doing so would afford dishonest exhibitors the means of communicating with them. This is certainly not very flattering to the judges of the Club's selection, implying, as it does, that they are not proof against efforts to tamper with their decisions, notwithstanding the alleged high qualifications of certain members to fill the office: for the judges being above such influences, any attempt would only end in the discomfiture of the exhibitors who resorted to such practices. But since your correspondent has raised this point, it may be asked what security have the public, that exhibitors who are in the secret of such appointment, for it cannot be supposed that there are no exhibitors among the Honorary Secretaries and other officers of the Club—will not avail themselves of their exclusive knowledge? And if we may judge by the denial of the palpable fact, and other features brought out in this correspondence, the officials are quite as open to the insinuation as the exhibitors.—AN EXHIBITOR.

MALAYS.—The admirers of this variety have now an opportunity of obtaining some of the best strain; for an advertisement states that Mr. C. Ballance intends selling his entire stock. That gentleman purposes discontinuing exhibiting, having so frequently to officiate as judge.

BOOKS.

LAST May I wrote a word or two about these interesting birds; and as Convocation has just been styled in some saucy newspaper "a parliament of rooks," I suppose I must henceforth regard the rook as a brother. I have just returned from a three-weeks visit to the seaside—three somewhat weary weeks to a lover of flowers and birds; for of the former I saw very few, of the latter none, save that I noticed a poor boy with his pet jackdaw on his shoulder, and, in spite of the strong breeze then blowing, the little bird with flapping balancing wings kept his place. I liked that jackdaw, and I liked his fond master—I don't believe he is a bad boy. Three weeks at the seaside, again I say weary weeks. How old one seems to grow, how rapidly old, at a watering place, for how many generations of neighbours one outlives! First when you arrive, there is in the same house the family whom the servants call by their name; they are old inhabitants of a week's duration, while you are only the gentleman in the other drawing-room. How you respect that old family sort of county people of long standing, with their names in the "Dipping Chronicle," among the visitors to that far-famed place. But in a day or two you take their position, and are respected in your turn by the newer comers. Then there are the neighbours outside. That large family in mourning—mourning worth wearing, for a rich aunt is dead, and her money brings them to the sea. Then there is the stout old gentleman with high white straw hat, and long telescope under his arm. Then there are the newly married couples, not that they care for the sea. Happy people, all the world to each other, my blessing upon ye! Now, I know how all these people and many others come to a watering place. They arrive in flys, looking for lodgings. The little girls carry dolls, and poke dolly's face out of the window for her to look at the sea. But I never saw these good people go. They are no more seen—they are missed. Others succeed them at their windows. The large family is followed by two maiden sisters; the stout gentleman by a thin roman-nosed lady; or the lodgings are not let, the blinds are down, and the balcony unoccupied. How did they, how do they go? Not in flys; you never see any save with new comers, though plenty of luggage is carried off on trucks propelled by grim-faced men grinning in the sunshine. Again I say, How do people leave a watering place? Perhaps they leave in the dark to hide their tears.

By the way, there is the reading-room at a watering place. How men congregate there! Poor fellows! they have little else to do. How they browse and browse on morning papers at one time, on evening papers at another; then the weeklies and the locals come in for a pleasant change. And how many generations of readers I outlived in my three weeks! Poor men! they looked so healthy, who would have thought they would have gone off so soon? Just in passing let me say, I did not see on the tables of the reading-room a single copy of "our Journal." Great omission this, for it was just the paper that the browsers would have delighted in.

"But you are saying nothing about rooks, sir." Wait awhile good reader; many a fine mansion has a long approach to it. But for this visit I should never have thought of the rooks, but I missed them, I wanted them, and now at Hilltop I see and hear them once more. I instanced in my little communication of May last the case of two rookeries, one never shot at yet yearly decreasing; the other shot at each year and becoming fuller. Now, I cannot take an old labourer's explanation, "Lor, sir, the birds like it," for I am sure they do not. I regret that I have had no word or hint on the subject in this Journal. However, I have privately had an explanation offered by a sportsman and a naturalist. Would that all sportsmen were naturalists, for then many a poor innocent bird would be spared, the windhover for example. My friend tells me he is sure that cock birds are more numerous than hens amongst most wild birds. Hence it comes to pass that if no rooks are shot, the cocks harass the hens, disturb their sitting, and drive the mated birds elsewhere. This, he tells me, is frequently the case with partridges. The man who to increase his birds allows none to be shot for a season or two, finds presently that he has no game at all to shoot, the quarrelling and fighting

end in dispersion and death. I would also add, Is it not reasonable that the young cock rooks being the stronger, earliest hatched according to your egg-theory, are the first to become branchers? and every one knows that the boldest branchers being clearest from the nest fall most frequently to the rook-shooter's gun.—WILHELMUS BACON.

ABOUT PIGEONS AND RABBITS.

ON looking over the columns of one of your recent Numbers, I find a valuable suggestion from Mr. Brant, recommending fanciers of Poultry, Pigeons, Rabbits, &c., to communicate their successes and disappointments, after the fashion of the apirians. I for one have long wished to see this plan adopted, as I think it would be a fruitful source of instruction and amusement to a great portion of your readers, and be the means of causing many a desponding fancier to be helped out of his difficulties.

I am a Pigeon fancier and have a crotchety that birds breed better if allowed to fly out; consequently, nearly all my breeding stock have been allowed this privilege until now. One morning last week a pair of valuable Turbits took a fancy to try their powers of flight, and very soon lost their "reckoning." Thinking if they could see the other Pigeons they would return, we went into the cote to set them out, and, having gone in rather abruptly, a valuable Carrier cock took fright and bolted. I can assure you that I now felt far from comfortable, but thinking that "of a bad bargain I must make the best," I set two men to watch them until night and then try to catch them; but in this they failed, and the trio remained out all night. The men were on the look-out by three o'clock the following morning, and kept watch all day. During the afternoon the Turbits discovered their home and returned, and by a piece of good management the men caught the Carrier at night. Of course, I had to pay them well for their trouble; and though it was rather an expensive lesson, I consoled myself with the reflection that it might have been worse. All my birds now see the daylight and smell the fresh air through wire-netting.

On looking over my stock after this escapade, I found a Barb hen looking very ill. I put her "in hospital" at once, but she continued to droop and soon died. I opened her stomach and found food, which I feel convinced had been there two or three days. The skin and flesh from the legs towards the tail looked quite green. On opening the ovary I found an egg partially formed, evidently within a day or two of being laid. Can any reader inform me what was the complaint and the remedy?

I am also a Rabbit fancier, but in this a complete novice. I have a lop-eared doe, and I find the hair is coming off her nose and the skin looks rough and scaly like scurvy. I have put flowers of sulphur on the place affected. What is the complaint and the remedy? I have a litter of young Rabbits about two months old, their ears are a tolerable length but both ears fall on one side. I should like to be informed how to make them fall properly. The parents are perfect lops. In conclusion I think I may say with Burns—

"But, mouse, thou art no thy lane,
In proving foresight may be vain;
The best-laid schemes o' mice and men,
Gang aft a-gley,
And lee's us nought but grief and pain,
For promised joy."

—J. I. D.

THE PIGEONS AT THE NEWCASTLE-ON-TYNE EXHIBITION.

BEING an exhibitor of Pigeons at Newcastle-on-Tyne, I went to see the Show, and when I arrived on Wednesday evening I found that two pairs of my birds had never been taken out of the baskets. They left Birmingham on Monday morning, and arrived at the Show between five and six o'clock on Monday evening. I complained to the Secretary, and we looked in the baskets, and found that the birds had not been taken out of the basket and put in the pens. As soon as he saw them he gave the first prize to my Satinettes.

I have been to a great many shows, but I never saw a show where Pigeons were so badly judged as at Newcastle. If I can find out where Mr. T. W. Botherley, of Darlington,

is going to judge, if I have entered my birds I shall never send them, as I consider that he does not know Pigeons sufficiently to be a judge.—H. YARDLEY.

[This is only one of many strange details we have heard about the Pigeons at the Newcastle Show.]

TRANSFERRING BEES—BEST ASPECT FOR AN APIARY.

I HAVE purchased two hives of bees, swarms of the first week in May, very strong, and of great weight, say 40 to 50 lbs. each. I have not brought them home yet, but intend doing so the first opportunity of getting them in at night. They are now in common straw hives. I wish to know if they can be shifted into a bar-frame hive, or straw bar-hive, without injury to them; but if too late, when can I do so? Can they be deprived of any of their honey if they remain where they are?

Also, my garden runs east to west, somewhat sheltered all round with palings, and currant and other trees. Shall I fix them to face the north? I should state that my house stands at the east end of the garden, so that they would be much sheltered from the east wind.—W. A. P., *Oxford*.

[Transferring new and heavy combs into frame-hives is far too difficult an operation for a beginner. If you can get some practice this autumn with condemned stocks, so as to master the art of driving bees, you may be able to manage the transfer in the spring. Full directions for performing the operation were given in No. 75 of our new series. Do not attempt to remove your hives until the weather is much colder than at present.

We prefer a south aspect—say from south-east to south-west—sheltered at the back, and from the prevailing winds, and free from all obstruction in front.]

REMOVING BEES TO THE MOORS.

As the time has now arrived for taking the bees to the heather, I would remind your numerous bee-keeping readers of the very great advantage to themselves and the bees which is derived from their removal to the moors. I find that the hives which I keep at home always lose weight after July, whilst those taken to the moors have at least six weeks honey-harvest.

I will now give your readers a few directions for removing the bees. The first thing to be attended to is to give them plenty of room, as, if the weather is favourable, they collect from the heath a very great store of honey; therefore, the day before I remove them, I place another hive on the top of the stock, and if they are in a bar-frame-hive (and no bee-master should use any other description, as in one season the bees will repay all expenses in the extra quantity, quality, and money value of the honey) I take all the honey out, except about 5 lbs., which insures their preservation in case, as last year, it should rain nearly every day they are at the moors. The brood of course must not be cut out of the bar-frames. Over the place where the two hives join I tie a piece of calico securely with two strings round each hive, so that the hives cannot separate, or any bees escape during their removal. I then raise the hive about an inch upon pieces of wood, and early next morning every bee has gone off the floor-board. I then spread a piece of open net or lino upon a board, lift the hives upon the net, and tie it securely with two strings round the hive; and when this has been done, having previously seen which way the combs are built, I turn the hives gently over with the end of the combs at the bottom. With swarms very great care must be used in this part of the operation, as the new combs, being as brittle as glass, will bend and break down with their own weight, and that of the bees upon them, unless they are turned over with the edge of the combs at the bottom. When turned bottom upwards the combs all rest upon their own foundation, and the heat always ascends and so escapes through the net, and the inside of the hive is kept cool. The honey, I find, will not run out of those cells that are not sealed over so as to do the bees any injury.

With old hives the same amount of care is not necessary,

as the bees varnish their combs with a sort of glue; and when they have had brood in them each pupa leaves its silken cocoon in the cell, which so strengthens the combs that in time they become nearly as tough as leather, and you can knock them about as you like, provided you give them plenty of air. The stock, after the above precautions have been taken, may be placed in a wicker basket, or tied in a cloth. Swarms ride the best suspended. The same amount of care in turning them over when you get them to the moors, and in bringing them back must be taken.

These grateful little creatures will repay with usurious interest the expenses of removing them from thirty to fifty miles to such luxuriant pastures, where many tons of honey are annually lost to the nation for want of collectors.—WM. CARR, *Clayton Bridge Apiary, Newton Heath, near Manchester*.

TIMES OF SWARMING.

"PHILISCUS" asks whether a swarm has ever been known to emigrate without a royal cell being sealed, or in process of being sealed. Allow me in reply to express my conviction that swarms generally emigrate before any of the royal cells are sealed.

If you remove the reigning queen from a stock in order to rear an artificial one, you will find that a royal cell is well formed on the third day after removal, that it is sealed on the sixth, and that a young queen emerges on the fourteenth. Hence, allowing two days for confinement of the young queens when formed with a view to natural swarming, this will give for interval between the time a royal cell is sealed and the period of the young queens' emergence, a space of ten, or say eleven days.

Now what are the facts in regard to natural swarming? Take the history of a hive for the following years:—

In 1853	the interval between its first and second was	12 days.
In 1854	"	" 13 "
In 1855	"	" 15 "
In 1856	"	" 18 "
In 1857	"	" 13 "
In 1858	"	" 11 "
In 1859	"	" 13 "
In 1860	"	" 15 "

The average interval between first and second casts, according to my experience, is twelve days. Between first and last casts I have frequently witnessed an interval of nineteen days; and in 1861 I had a hive which threw its first and second casts on June 15th and 27th, and its third and fourth casts on July 2nd and 5th, thus making an interval between the first and second casts of twenty days, the longest interval I have ever known. Only on two occasions, once this year, and once in 1854, have I had second casts in less than ten days after the departure of the first swarm. If, therefore, it happens in other localities as in mine, that a second swarm does not depart until ten or fourteen days after the first left, and if young queens are ready to emerge, and do emerge in artificial cases on the eighth day after the royal cells are sealed, it follows that swarms in some instances may perhaps have left before the royal eggs were hatched.—R. S.

EXISTENCE OF A QUEEN DOUBTFUL.

I SHALL be obliged by "A DEVONSHIRE BEE-KEEPER" answering me the following:—I drove a swarm of bees out of an old straw hive about a fortnight ago, they had not swarmed before doing so. I cut the comb out to examine whether the queen had been left behind, but did not find her, and supposed all was right. I left the comb in the old hive for the bees of the apiary to clear out. The following morning I went to remove the comb and old hive, and was much annoyed to find a queen alive, but in a weak state. I had no time to stop and take pains to introduce her to the hive, but placed her inside, when she was ejected immediately. The bees are working well, and I notice that they vibrate their wings opposite to the entrance. Is not this a sign that there is a queen inside? I am in hopes that the queen I found was a young one, that came out of the cell after I had driven them, but I had not time carefully to examine the comb, being called from home. I have a weak cast-

ing which I could add to this swarm to make sure, if you think I had better do so. My hives are the wooden octagon hives of Ayrshire, and not bar, so that I suppose I had better sprinkle them well with sugar and water before adding the two together. Your advice will greatly oblige—
LOOSE BOX.

[If the bees continue to work vigorously, there can be little doubt of their possessing a queen. If, on the other hand, they should have ceased active work, whilst other hives remain busy, it may be well to add a small swarm. Sprinkling with sweetened water scented with peppermint will in this case tend to prevent fighting.—**A DEVONSHIRE BEE-KEEPER.**]

ADDING QUEENS.

I find the only safe mode of adding queens is by fumigation. I tried the plan by putting the queen on the top, and when I let the bees in they would soon have killed her had I not taken her away, so at night I fumigated them, and there was no more fighting, and the next day they came off with the queen as a swarm.—**A. M.**

BEEES IN THE SHOW-YARD OF THE ROYAL AGRICULTURAL SOCIETY

AT NEWCASTLE-UPON-TYNE.

THE following extract from the *Northern Daily Express* shows the light in which the unusual sight of an observatory-hive presented itself to the mind of a Newcastle reporter, whose want of knowledge of the subject is evidenced by his mistaking the sex of the working bees:—

"A MODEL FACTORY.

"Stand 194—G. Neighbour & Sons, Regent Street, and High Holborn, London.—We have heard of model farms and model lodging-houses for the working classes; but it was reserved for the Royal Agricultural Society's meeting in 1864 to introduce to our notice a model factory, where we may see representatives of the working classes busily engaged in their daily avocations. The stand which we have quoted above may afford fruitful study to such philanthropists as the Earl of Shaftesbury, who make it their benevolent aim to elevate the masses; and the lesson here given from actual life will not be lost upon working men themselves.

"There are several striking features worthy of notice in the 'model factory.' We can clearly perceive that it has been established on a principle which is essential to the success of any great concern—viz., the principle of a good understanding amongst the operatives themselves, and between them and the head of the establishment. What strikes us in this model factory is the unity of action which reigns throughout. There is no jostling of rival interests, and no misunderstandings or cross purposes. The operatives in this establishment are so numerous that we question if any one has as yet been able to count their number, and yet all seem to be working in perfect harmony, their joint labour continually leading to one beautiful and sublime result.

"Another feature specially noticeable in the establishment in question is the principle of subordination. Singular to say, that while the operatives are males the foreman of this model factory is a female; but that circumstance need not shock the sensibilities of our fair friends any more than it ought to offend the prejudices of the sterner sex, inasmuch as the mighty empire of Great Britain is ruled by the gentle hand of a female; and moreover in the one case as in the other, the presiding genius, amidst all her official cares and duties, takes care to preserve the modesty of her sex. She never in the slightest degree obtrudes herself needlessly on public observation, and probably on that very account the respect shown to her by her subjects is the more profound and devoted.

"There is, however, one particular in which we would take leave to demur to the idea of this factory being in every respect regarded as a 'model.' We have not been able to discover that there is any particular period of the day in which the operatives are allowed to take refreshments. We in England have been accustomed to regard the dinner hour

somewhat in the light of a sacred institution. And if the Council of the Royal Agricultural Society mean to set this up as a model institution, we are of opinion that some explanation on this point is desirable. Indeed, we have not been able to discover that the operatives in this establishment take any refreshment whatever. If they do, it must be 'on the sly,' vulgarly speaking.

"There is one peculiarity, however, which must tend to popularise this institution, and which has served to make it one of the most attractive objects on the show ground. It is the fashion in all the great factories which abound on the banks of the Tyne, and throughout the country generally, to act on the principle of exclusiveness to a very great extent, and perhaps wisely so. As you approach the door you see an intimation in legible characters 'No admission except on business.' This may be very proper, but it is rather tantalising. In the model factory, which we are now describing, all the operations are open to inspection. Every action is patent to the eye of the spectator. This has been effected by a skilful contrivance, and it is this contrivance, in fact, which has entitled the inventor to obtain a place in the show ground for his model factory, which he describes by the somewhat ambiguous term of 'a new implement.'

"But our readers may wish to learn what is the staple manufacture of this wonderful workshop. We reply—'honey.' The factory we speak of is nothing more nor less than a bee-hive; or, to quote from the catalogue, 'a unicomb observatory bee-hive,' with living Italian alpine bees at full work; invented by T. W. Woodbury, Esq., of Exeter; improved and manufactured by the exhibitors. As implied by its name, this hive has one comb, so that both sides are fully exposed to the light of the day, thus allowing of an easy inspection of the queen bee, surrounded by her retinue. Price £10 10s."

BEEES IN SURREY.

I COMMENCED bee-keeping in May, 1863, with a fine swarm. I let them have the whole of their labours of last summer to themselves, knowing that if I took the honey from them I might also take eggs or brood. The result has been, that when your correspondent was describing the danger of foul brood, my stock was hatching-out quantities of young. On the 12th of last May I opened one of my side boxes (collateral-boxes), and on the 26th of July I took off that box and found it contained 25½ lbs. of honey and comb. On the 18th of June I let the bees into the other side box, and that is half full of honey at the present time, besides the middle box or pavilion of Nature, which has all the honey-cells sealed, and with the contents of which I never interfere, so that they have plenty of food to carry them through the winter. At the end of the season I purpose taking off the second box, so that I shall most likely obtain from that stock alone between 40 and 50 lbs. of honey. Whatever it is I will inform you.—**T. S.**

P.S.—Do you think I shall weaken or impoverish my stock by taking the second box off?

[If the stock-box be well filled, and the side box free from brood, you will not injure the stock by removing the latter.]

SUBSTITUTING BOXES FOR STRAW HIVES.

I HAVE two common straw hives, the one containing a last-year's swarm, and the other an early one (2nd May), of this year; and under each a plain wooden box of my own rough make, both well filled with comb and bees. The end of one of these boxes is glazed, so that I can see that my labourers are rapidly filling it with their gathered sweets; and I have no doubt that the same is the case with the other, as they are a very strong stock, and work well.

I desire to remove the straw hives, keeping the boxes as stock-hives, on which to place supers (of glass) next season. Being a novice, I am in doubt as to the best time to perform this operation. I presume early in September would be a suitable season, but shall feel greatly obliged by your advice on the subject. Probably if the severance were effected now, I should get two stocks for one; but I am indifferent as to that, as I would rather have the stocks in

the boxes as strong as possible, than weaken them by division.—X. L.

[Early in September is a very good time for the operation, which will be successful if the bees have been able to fill the hives with honey and have transferred the seat of breeding to the wooden boxes. You could scarcely have multiplied your stocks in this manner by dividing them earlier in the season.]

EXTRAORDINARY LIGURIAN SWARMS.

On the 7th of June the first swarm came off, on the 11th I heard piping, and on the 16th a second swarm came off. On the 21st a queen came off, and was secured, and made a swarm of; on the 22nd the third swarm came; and on the 5th of July I got a maiden swarm; on the 8th a second maiden swarm; and on the 16th a third maiden swarm, besides which the old hive threw me out thirteen dead queens, and the first swarm has thrown me out nine dead queens, besides the three swarms.—A. M.

BEEES DYING FROM CONFINEMENT.

LAST season I bought a capital swarm of bees, housed them in one of Nutt's boxes, and everything went on well until they had filled a ball-glass with honey, and gave indications of throwing off a second swarm ("cast," I suppose). I then added a side box, and the bees directly began to kill each other. After losing some 200 bees I removed the box, and all went on right as before.

This year I took a large bell-glass of honey early in June from the same hive (by the way, why was there a brood-comb in the bell-glass?), and added the same side box as before, partly filled with comb, and they make no progress. They have just begun to kill each other again; and, strange to say, they amuse themselves by dragging dead bees from the bottom to the top of the hive, and then dropping them again. The dead bees are mostly smaller than the living ones.

What am I to do? I want to keep bees as an ornament—they are inside a garden-house—but I have neither ability nor courage to search for the queen, or drive, or artificial swarm, or any other scientific method, of which I read such interesting accounts in your Journal.—NEEDLE.

[Your bees do not kill each other, but die from being unable to find their way out of the box. A small entrance in the side box will stop the mischief, by providing a ready means of exit. So, also, with regard to their "amusing themselves" by dragging dead bees to the top of the hive, and then dropping them; this is really an unavailing attempt to clear the hive of dead bodies, and will cease as soon as a direct means of exit is afforded them. The presence of brood in a super is by no means unusual.]

WHAT IS THE DURATION OF LIFE IN THE WORKER BEE?

FROM certain hints thrown out by some apiarian writers, I infer they have an impression that an abundance of youthful element in stock-hives in autumn is absolutely requisite to their success in spring. Will Mr. Woodbury oblige me and other readers of THE JOURNAL OF HORTICULTURE, with some information regarding the average length of the natural life of the worker bee? If a swarm were lodged in its habitation on the 1st of May, in what time might it be expected to perish, supposing that at the end of every twenty days, during the summer and autumn, the brood-combs were entirely removed?—R. S.

[I think I cannot do better than quote in reply to my esteemed correspondent, the opinion of that great master in bee science, Dzierzon, on this point. He says the duration of life in the worker bee varies with circumstances. "Of the bees produced in May or June, few live longer than two months, if owing to favourable weather they can be continually busy. If to ever so strong a stock of black bees an Italian queen be given, either in spring or summer, there will after six weeks be but few, and in two months probably

not any black bees remaining. But it also makes a difference how far bees fly, and upon what they pasture. When gathering from the corn-flower for example, they appear to grow old very soon, as the sharp leaves of this flower, as well as the close-growing corn, seem to wear out their wings very rapidly. They appear to preserve them much better when pasturing upon buckwheat blossom, partly because the flight, although strong, lasts but a few hours in the day, partly because they can conveniently hover about the blossom without their wings coming in contact with it. Bees, however, preserve themselves best, and scarcely seem to age at all when in a state of rest. Those, therefore, hatched in September look as juvenile and strong in February and March as if they had left their cells only a few days before. Also, if they pass their time in summer in a similar state of rest, as is the case in stocks without a queen, or inactive from other causes, they may, perhaps, bring their age up to a year, or even beyond it. That the worker bee, even if it escapes every danger, should reach the age of the queen, and live several years, as believed by the Baron Von Ehrenfels, is very unlikely. If he had known the Italian bee, and had experimented with it, he would scarcely have asserted this."

My own experience, also, leads me to believe the worker bee to be a short-lived creature, whose existence frequently terminates in a few weeks, and is seldom prolonged beyond six or seven months.—A DEVONSHIRE BEE-KEEPER.

FLOWERS FOR BEES.

AT the commencement of this season I procured seeds of borage, poppy, &c., and have noticed that even these, and a large variety of other flowers, have been comparatively forsaken, from the bees preferring what my man calls the "French Willow" [*Epilobium angustifolium*, Narrow-leaved Willow Herb], amongst which they really seem to luxuriate; and, from their liveliness and buzzing joyfulness, satisfy me that, of all the flowers of the garden, it is the one most palatable. It is, besides, a pretty object at a distance; and, what makes it much more acceptable, it requires no care in its cultivation. I am only afraid, if needed, it would be difficult to eradicate, as the clump which we thought cleared is again as prolific as before, although, out of three yards square, we planted a strip at least a hundred yards in length.—W. G.

OUR LETTER BOX.

SMITH POULTRY SHOW.—I find prizes stated to be given to exhibitors, quite different from what is put down in the catalogue. I find several pens exhibited did not belong to the parties named in the catalogue, yet still getting prizes—not according to the rules, which are very stringent.—COUNTRY SUBSCRIBER AND EXHIBITOR.

WILD FOWL (J. G. F.).—The food of my wild fowl consists of waste bread, the crumbs from the table, and of corn of any description except oats. They are fed on shallow saucers, because if the food be thrown into deep water much that sinks is lost. I have always had mine from Bailly, in Mount street. Any one is a judge of their condition so far as plumage is concerned, and all there is to guard against is their drowning from dryness of plumage, and their being insufficiently pinioned. The wing should be cut off to the spur.—B.

POINTS OF COCHINS (C.).—A full answer to all your queries would take up too much space. In all Cochins the head should be small and intelligent; the comb small, perfectly straight, and with numerous serrations; the last joint of the wing clipped up, the legs well feathered, the fluff large and soft, the tail small. If the tail be higher than the head, so much the better. Black feathers in the tail do not disqualify. All other distinctions are those of colour only. All mixtures are mistakes.

DORKING COCK WHEEZING (Agnes).—The Dorking cock is suffering from cold or incipient roup. In either case the treatment would be the same. Give castor oil freely, a tablespoonful at a dose, and every other day. Twice or three times per day for a week, feed on stale bread steeped in strong ale. Keep him in a dry place, and let him have sun if possible.

SPANISH CHICKEN COMBS (Country Poultry-keeper).—As a rule, we do not choose the largest combs in Spanish chickens, they are apt to fall over, which is a fatal fault. We should prefer the small ones, if the birds are as good in every other respect. At the same time we would not lightly discard the large if they were perfectly straight and upright.

COCHIN HEN DISEASED (H. M.).—We are afraid the hen is a bad case, we have seen many such, and have never succeeded in curing them. The thigh and leg generally wither.

NAME OF BIRD (Pao Nono).—From the sketch of the bird which you have sent us, there is no doubt about its being the Pope Grosbeak, which is a species of the Cardinal, but not the crested one.

LIGURIAN BEES (Surrey).—Write to T. Woodbury, Esq., Mount Radford, Exeter. Bees will not injure poultry, but if too near neighbours the latter will do mischief by picking up tired bees, which frequently drop and rest on the ground near their hives.

WORK ABOUT PARROTS (B. H. W.).—We know of no such publication.

ADVERTISEMENT (Cymo).—We cannot give any opinion on the subject.

WEEKLY CALENDAR.

Day of Month.	Day of Week.	AUGUST 9-15, 1864.	Average Temperature near London.			Rain in last 27 years.	Sun Rises.		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock before Sun.	Day of Year.
			Day.	Night.	Mean.		m.	h.	m.	h.	m.	h.	m.	h.			
9	Fr	Swift last seen.	74.2	50.2	62.2	14	39	44	39	47	59	11	47	9	7	m. 5.	217
10	Sa	Purple Mistle Goose flowers.	73.2	52.9	64.0	17	40	4	34	7	after.	20	10	9	8	5 12	223
11	Su	Pustle Pease Grass ripe.	76.6	54.5	65.6	17	41	4	29	7	11	2	0	11	9	4 54	224
12	Mo	Mishelmas Daisy flowers.	75.1	51.9	63.0	14	43	4	27	7	13	3	50	11	10	4 44	225
13	Tu	Meadow Saffron flowers.	74.1	50.2	62.1	17	44	4	25	7	11	4	morning.	11	11	4 38	226
14	We	12 Sunday after Trinity.	72.2	52.0	61.6	15	46	4	23	7	59	4	50	0	12	4 22	227
15	Th	Swallows congregate.	72.8	50.9	61.4	15	48	4	21	7	43	5	0	2	12	4 11	228

From observations taken near London during the last thirty-seven years, the average day temperature of the week is 74.2°, and its night temperature 51.0°. The greatest heat was 92° on the 10th, 1842; and the lowest cold, 32°, on the 13th, 1850. The greatest fall of rain was 1.74 inch.

SEVEN YEARS' HISTORY OF A LITTLE LAWN.



RISING young barrister, a very clever fellow, received, one morning, a letter from an old college friend, who had recently become rector of a country parish. The clergyman, after informing his quondam crony that his son, the barrister's godson, aged one year, was getting on nicely, and now trotted about "quite strong on his feet," to use his mamma's descriptive phraseology, proceeded to narrate that finding married housekeeping somewhat expensive, he had determined upon taking pupils. Then came the questions, Would his London friend, who, he knew, saw a great many people in his active career, give him any help should he be able? Might he also refer hesitating parents to his barristership as a referee as to his capacity for teaching, &c.? The barrister smiled at the idea of his very good-tempered but at college rather non-reading friend becoming a tutor, for in truth he had been a trouble to his tutors; though perhaps the London man, being himself very well read, somewhat underrated his friend's knowledge. The two met in the street a few days subsequently, and after such a greeting as only friends in youth give to each other when they meet in after life, the barrister said, "By the way, about your letter. Well, my good fellow, of course I shall be delighted to say a word in your favour, and do all I can for you, pray command me; but I tell you what, Tom," dropping his voice, and with a sly look, "what can you teach?" "Hush!" replied the clergyman, "at any rate I shall know more than the boys." "Well, true; I forgot that, certainly; so you will."

Now, in occupying a little space in the flower department of this Journal, I wish to say I write in a very modest spirit: I am but an amateur, with a heart for flowers and an eye for the beautiful, "still I know more than the boys," and by the boys I mean the young readers of this paper, or the young in gardening experience generally. Now for these I especially write to-day, and for those who have but a small garden.

Seven years ago a family took possession of a prettily-situated house in the country. It was their own; not the Queen and the Parliament combined could deprive them of it. Sense of ownership always brings pleasure; a tenant may be turned out, but not the real owner; hence we usually see, save with the improvident, that it is the owner of a house, or one who rents upon a very long lease, that does much to improve the place, and to make it twice his own by alterations according to his fancy.

Well, the grand moving day came, and the family took possession; the children, in glee, ran from room to room, and the little ones lost themselves in the new house, bolting as often into a wrong room as the right one.

When the house had been put in order, then there was the garden to think about. That denominated the kitchen garden seemed to crave no alteration; but there was the little lawn on the south side of the house—it measured only 75 feet in length, by 55 wide—that must be altered; but how to alter aright was a puzzle. Let us paint the little spot in words. There was the three-foot border under the windows—well, that would do; then the gravel path along that, terrace-like and sunny—that would do; then the lawn, sufficiently sloping to interfere somewhat with a hands-in-the-pocket stroll down, converting the stroll almost into a jolt. On the east side of the lawn was a good border, scimitar-shaped; at the bottom, between the edge of the grass and a well-grown Laurel hedge, was a narrow straight strip—just the thing for standard Roses, as the roots would be kept cool by the shade, and the subsoil was a rather stiff sandy clay. On the west side a dense Laurel hedge severed the garden from the village lane; and in the hedge a noble Elm, fit ornament for any park, but far too large to be near a garden. Added to the mischief of so large a tree (yet, who would be such a Goth as to cut it down?), the lane ran obliquely by, and threw the lawn "all of a squint," as the country people say, making it awkward to lay out, and awkward to plant, as some beds would not come true to the eye. On it the new owner found eighteen beds, chiefly on the top and the side away from the Elm. Little of design was apparent; the beds might almost have belonged to a school of eighteen pupils, each bed being a child's garden, cut out according to his fancy, irrespective of its bearing upon the other beds, or of the general effect.

These were days prior to "King Croquet;" so the poor little lawn was smallpoxed very thickly on three parts of its surface with little ugly beds. The first summer was very dry, and the beds became little dust-holes. (N.B.—They were not dug out to any depth, and the soil of the lawn was made up of the rubbish left when the house was finished: hence it was a concrete of bits of brick and limestone). The first summer, then, was very unsatisfactory. Long before the second came the owner reduced the beds to twelve. This proved a very wet summer, so the little beds were often little ponds, and the flowers bloomed badly. In the third summer the beds were reduced to nine, in the fourth to seven, in the fifth to five, and so they remained for the sixth. Now, upon each reduction there was this advantage gained—the beds being larger, they were less of either dust-heaps or ponds; but there were these two faults—when you reduce your flower garden, by preserving some beds and blotting-out others, it is difficult to make any plan pleasing to the eye; and with this particular lawn, running away to the right "all of a squint," no plan would please—some bed, at some point of sight, came wrong to the eye.

But to continue the story. Last spring every bed was laid down in grass, and an oval one, 22 feet in length, was cut in the centre; it was made 3 feet deep, and filled with good soil. That bed I saw the other day; it was

planted upon the usual system, with an edge of *Cerastium tomentosum*, next *Lobelia*, then Tom Thumb *Geranium*, then yellow *Calceolarias*, with the middle space filled with white, whitish, pinkish, and pink *Geraniums*, while quite in the centre line were dark purple dwarf *Dahlias*, with *Salvias* between. The bed looked nobly; the little lawn was no failure now; while below the bed, on the flatter part of the grass, "King Croquet" was reigning, and a group of happy children, little queens of their several homes, were standing mallet in hand.

Now, what are the lessons to be learnt by the seven years history of this little lawn? First, that in a retentive soil little beds do not answer; while, on the contrary, large beds containing more soil, the flowers in them bloom better. It also says how foolish for little people to ape great people; a simple plan is best for a small garden. Readers, despise not, then, my little history.—WILTSHIRE RECTOR.

VISITS TO GARDENS PUBLIC AND PRIVATE.

MR. BEWLEY'S, ROCKVILLE, DUBLIN.

WHEN, in mentioning my departure to the scenes of my earlier days, I said how difficult it would be to realise the feelings of those days amidst even the places in which they were experienced, I did not sufficiently calculate on the strength of the impressions. I little thought how even the lapse of well nigh thirty years could do but little to efface them, and how every nook and corner came to be as well remembered spots; for I could trace my way in paths which I had not visited since those days; and the faces of those on whom many years had left their sure and certain marks came back to me with all the freshness of those days, and one seemed for a little to be thrown back in one's history, and all that occurred since then to be but an "airy and unsubstantial dream." I do not know whether it falls to the lot of many to have such an experience of life—to be separated for so many years from the scenes of one's youth, and then to visit them in middle life; but I know of nothing that ever preached to me a more solemn sermon as to the lapse of one's own days and the dreamlike character of human life.

However, my work here is not to sermonise, but to give some information on subjects connected with our common pursuit. I have already mentioned a few things connected with what I called gardening under difficulties, but I would not have it to be supposed that this is all that I had seen. I must, however, mention that horticulture did not form the special object of my journey, and indeed so little entered into it, that although I passed through the towns near which two of my correspondents lived in the far north, yet I was unable to visit them, although, as my driver said, one "had the purtiest place in all the county." One show place, however, I did see; and although Mr. Fish has so ably and graphically described it, yet I may be excused, perhaps, saying a few words, for in such a place and under such management as Mr. Bewley's two years make a vast deal of difference. So much energy is shown, money is so liberally spent, and the science of gardening so well understood, that it is remarkable what progress a little time makes.

Mr. Bewley enjoys unusual facilities for obtaining plants, and hence large masses are to be found in his collection which would not be readily found elsewhere. Instead, however, of a long enumeration of the various productions, I may, perhaps, best serve the interests of horticulture if I dwell upon some few points of unusual character which were pointed out to me by the accomplished owner of Rockville. Amongst these was one which was perfectly novel to me, but which may not be so to some of the readers of THE JOURNAL OF HORTICULTURE—I mean the system of double-roofing adopted by Mr. Bewley (Mr. Fish described it two years ago, but it does not seem to have attracted much attention); and to which, indeed, may be added in his conservatory and Orchid-house double sides also. That, however, there is much of novelty connected with it I gathered from the fact that Messrs. Veitch had sent over one of their *employées* to obtain correct information, in order that they might erect a house 130 feet long on this system. We are all aware how difficult a thing ventilation and equable

temperature are in houses, how plants alternate between a dripping atmosphere and a dry torrid-zone sort of state, and how much time, labour, and money are consumed in heating houses. Now, it struck Mr. Bewley that a great deal of this might be obviated by adopting the system to which I allude—that if he could get some 4 or 5 inches of air between the two layers of glass, it would be like Paddy's frieze coat, equally good for keeping out cold and heat, and that, however expensive in the first instance, it would ultimately repay him by the diminished cost of fuel and labour, and this result he has fully accomplished. I am not quite certain as to my figures, although I took them down at the time; but I may safely say that if any further information is required Mr. Bewley would be most happy to supply through your columns any that might be needed. Thus, he has found in his Fern-house, which contains exotic species of various kinds and degrees of tenderness, that he can dispense with the consumption of coke altogether between May and September, and that the amount used from October to April was one-third less than under the old plan. In his Orchid-house he had been exposed to a very severe trial of the plan; for, during the hard frost of January in the present year, he had the unfortunate news brought to him that his pipes were out of order. A man was sent for at once, but some joints had to be fitted which, he was assured, would be ready before night. However, when night came, it was found they were not the size, and he had nothing for it but to brave the frost. We know what that would mean in ordinary circumstances, with the thermometer below freezing at sunset, and no fire (cool-house treatment!)—all would have perished, or been so injured as to be good for nothing. What, then, was Mr. Bewley's surprise and pleasure to find that, owing to his double-roofing, the thermometer had only fallen from 51° to 48°, and as he was compelled to wait another twenty-four hours, that in that time it had only fallen another 3°. He was amply repaid by this one event for all the money he had expended in the double-roofing. Then, again, he is never subject to a dry atmosphere. When he enters the house of a morning the whole upper and under surfaces of the plants are covered with dew; and some of the creeping plants had firmly rooted themselves against the glass. In the fernery the difference of temperature between the bottom and top of the house was 15°; and nothing could be more beautiful than the appearance of this house. I should add that, in the glazing of his house he uses what is called greasy putty—that is, ordinary putty with the addition of a little grease. This never thoroughly hardens, and consequently prevents the glass breaking, by allowing for the expansion and contraction occasioned by changes of temperature.

The fernery is adjacent to the orchard-house, which latter, a fine structure, I was unhappily unable to judge of, as, owing to some circumstance, the trees were not bearing well, and the mildew had largely attacked the Vines. I found, however, that it received at certain seasons some heat, and, consequently, was not the kind of orchard-house that I was most anxious to see, but rather a fruit-house, as indeed Mr. Fish called it; but Mr. Bewley assured me that last year he had had some very fine fruit, and abundantly produced. The fernery is indeed a noble sight, and as the result of but two years growth something remarkable. It would be impossible to give an idea of the extreme beauty of the arrangement and the vigour of the plants which it contains. The gothic appearance of the structure suggests the idea of some ruined church into which has been carried all the choicest varieties of this beautiful tribe. Here were on the floor of the house magnificent specimens of tree Ferns, *Cyathea*s, *Dicksonias*, and *Alsophilas*. Along the sides masses of rocks are arranged of very varied hues—red granite, conglomerate, tufa—of all fantastic forms, and in them were inserted Ferns of the more delicate-foliaged kinds, such as *Adiantums*, &c.; then a staircase, well hidden by rocks and foliage, leads to the roof of the house, where, as the temperature is somewhat higher, the more tropical Ferns are placed; and from this the view over the top of the house is beautiful in the extreme. You have the full expanse of the tree Ferns full in view, one *Dicksonia* being 20 feet across, while the arches and sides are covered with verdant foliage.

Mr. Bewley had tried various experiments as to what would best contrast with the Ferns. One thing after another

had been tried, and at last a tribe which would hardly have suggested itself to any one, the Begonias, was found to be the most suitable. Those who have only seen these in pots can have but little idea of them as they are grown here. Plants which were placed in crevices with not more than a quart of earth had grown so vigorously that they had run over the rockwork, forming large handsome leaves, and evidently showing that this was their real character—viz., rock plants. Nor is this the only way in which experiments have been tried. The colour of the glass was a matter that gave him some concern, and various tints had been tried; but at last he came to the conclusion that a claret or reddish brown was best suited for throwing up the green foliage within, containing as it did the red, which was the complementary colour to the blue and yellow which in various degrees made up the green of the Ferns and Mosses. It has a curious appearance outside, but unquestionably effected Mr. Bewley's purpose. Not that there was anything of unhealthiness in the Fern-house that required it absolutely, but it only tended to increase and intensify the beautiful freshness within. Amongst other plants used for decorating the sides and roofs were *Ficus stipulata*, *Begonia fuchsioides*, *Ivies* of various species, *Hoyas*, *Woodwardia radicans*, *Trichomanes radicans*, &c.—in fact it is a fairy scene, which, as the old story goes, must be seen to be properly admired.

Nor can I omit what I believe is Mr. Bewley's especial pet. He has in his dining-room a large oblong Fern case, containing the most beautifully luxuriant mass of the *Kilmarney Fern* that can be possibly imagined. Mr. B. says that the great secret in growing this is not to encumber the case with soil, but to plant amongst pieces of rock, using comparatively but little mould. I can only say that in its way the case was on a par with the very beautiful mass of the *Tonbridge Wells Fern* which I saw last year at Lady Dorothy Nevill's.

Since Mr. Fish's visit two years ago Mr. Bewley has added another very charming feature to his grounds in a garden for his daughter, who felt that she could not enjoy the garden owing to its fame bringing a constant stream of visitors. This garden may perhaps be best described as a cloister, round two sides of which run a series of gothic arches glazed at top. These arches are made of tufa, and at their base were planted *Honeysuckles*, *Ivies*, *Clematis*, &c. The borders are planted with flowering *Peaches*, *Rhododendrons*, &c.; and this indeed was the only exception I could make to the great taste displayed, as they were too large for the space, and did not agree well with the other arrangements. But what glorious masses of Ferns there were! Wouldn't Mr. Ivery be delighted to see some of his choicest pets flourishing here in such grand vigour? Here was *Athyrium Filix-femina*, *Frisellia*, there *plumoseum*; here, again, a noble plant, *Athyrium Filix-mas crispum*, there *Osmunda regalis* was treated to a place especially prepared for it and two other kindred species. But I question very much whether it is necessary to give this Fern so much moisture as is commonly done. I saw it treated as an ordinary garden plant in the garden of Lord George Hill, and the plants were from 4 to 5 feet high; while on a sod of turf near his lordship's excellent hotel at Gweedore I saw a nice plant of it luxuriantly flourishing on the top of a dry bank. Then the *Aspleniums* were well represented, and, indeed, the greater number of our British Ferns. As this is only a recent construction it will improve from year to year; but even now it is as beautiful in appearance as it is novel in design. In the lawn enclosed by these cloisters flower-beds were introduced, as well as standard *Rhododendrons* and *Conifers*; while at one end a wide-spreading *Beech* invited any *Tityrus* or *Melibæus* to repose beneath its umbrageous branches.

It would be impossible to adequately describe the beauties of the conservatories and houses, nor, indeed, do I consider it at all necessary, as it has been done so well and ably by Mr. Fish; but I have thought it well to mark a few things that struck me, in the hope that they may show some of our friends what can be done in poor Ireland. Many people seem to have an idea that in all things she is behind the rest of the world, but I think Mr. Bewley may fairly challenge this country to produce any collection superior to his own; and to one who, like myself, can look back on what horticulture was some thirty years ago in Ireland and con-

sider its condition now, it is indeed very marvellous to see the improvement.

There was one whisper that I heard, however, which grieved me somewhat; and that was that the fatal policy of ignoring florists' flowers, and exalting stove and greenhouse plants and Orchids, is creeping into the councils of the Royal Horticultural Society of Ireland. I may instance as an example, that florists are expected to exhibit Carnations and Picotees on the 1st of September, because the Society could not afford to have the smaller exhibitions at which those flowers used to be exhibited, and this with, I believe, nearly £1000 in hand! Two large growers have given up growing them for exhibition, feeling that it was impossible to fulfil the conditions required; and hence a beautiful and favourite flower will be neglected. As an outsider, only interested in the success of horticulture, I hope that my words may be taken as they are meant—in a friendly spirit, and used for the best interests of the pursuit of horticulture.—D., Deal.

HEATING BY STOVES.

In No. 153, page 172, there is an Arnott's stove strongly recommended; but I should doubt the practicability of daily cleaning out the clinkers, &c., as the depth between a and b is so great. Could not the same plan be carried out with an opening at top just in front of the chimney? Would the bent pipe answer as well if made of one-inch gas-pipe and to come out through the cover at top?

In Vol. XXVIII., page 630, is another Arnott's stove without hot-water pipes, and which I think of trying, but "J. S." omits to state the length of flue in his eighteen-foot house. I have always heard that these stoves require to go into a chimney within 3 or 4 feet in order to obtain a good draught. The furnace-cover is said to be 13 inches square; but this must be too small to cover a wall 4½ inches thick back and front, with a ten-inch opening. It should be 19 inches square at least. I am constructing a pit 20 feet long by 7 wide, and 6 high in the centre, sunk 2 feet. Should I place one of these stoves in the centre with a chimney to go out at once? Should a chamber be formed at the west end so as to grow Cucumbers and act as a propagating-pit? What sized pipe would be required for a chamber 2½ feet wide by 1 deep (What depth is best?), and 20 feet long? Perhaps for such a pit the bent pipe passing once through the furnace would not be sufficient.

I have a greenhouse 15 feet by 8½, with a hipped roof, back wall to the east, and on the west side is a tank 4 inches deep, 2 feet wide, and 8 feet long. I have fired one of Riddell's slow-combustion stoves inside the house. It works well and is easily cleaned out and supplied with fuel at top. The three-quarter-inch pipe is bent to go into the wooden tank. The stove, no doubt, will keep out frost in winter, but on trying the stove and tank for two or three weeks I find the water gets sufficiently warm to heat the sand above the slate covering to the tank in two hours. If I were to make up the fire to last the night I should have the water boiling and at too great a heat. I had a great difficulty in keeping back the steam at the opening where I supplied the tank with water. I placed a large tin box over the opening, dipping into the sand, to keep back the steam. This takes up much room. Would not a two-inch drain-pipe, with a cover fitting into sand, do as well to keep back the steam? I am obliged to take the flue in a 3½-inch iron horizontal pipe, 30 feet across a yard into a chimney. It draws sufficiently well at present. I burn coke and cinders. How can I check the heat in the tank? If the fire is not attended to it is out in two hours. My great trouble in heating this small house was having no flue or chimney to go into. So small an iron chimney would soon have become clogged if coal had been used with the usual furnace and flue.—G. C.

[Your various questions clearly show the importance of making every plan and system stand or fall on its own merits. Many plans and systems fail because those who adopt them must leave out something, or add something of their own devising, and then they are always good enough to blame not their own superior wisdom, but the system which they did not adopt, from attempting to improve it. Now, though we have not tried it, yet in opposition to your doubts, and judging from analogy and experience of other

stoves, we should have no doubt at all of the stove described at page 172 of the last volume answering admirably. There is not a point we would wish to alter. The stove being placed inside the house, a close-fitting doorway is essential, and we can see no advantage in placing that feeding-door higher up opposite the chimney. The reason for the position of the feeding-place we deem most conclusive. An opening in the cover of the stove would taint the house every time it was opened.

What you say of the impracticability of cleaning out the clinkers almost shows you must have skipped the description of the peculiarity of the grating or fire-bars, which, dropping down whenever you wish it, allow of everything being removed at the ash-pit door without any necessity for putting your arm down inside at all. This plan of grating for stoves or boilers was, we believe, first given by Mr. Allen, in a previous volume, and repeated in our manual "Heating," page 37. Be assured no opening at top from such a stove inside the house would suit equally well. Your proposed bent pipe of 1 inch would, no doubt, give you heat in proportion to its size, but the double size of the pipe, and the bend in the fireplace, in the plan, would be likely when wanted to give three times the amount of heat; and if not quite so much, there would be the advantage of never having the pipes so hot as they would be from a one-inch pipe.

Then, again, by turning up the plan referred to in Vol. XXVIII., page 630, you will perceive that you have, no doubt, unwittingly mingled what is quite separate and distinct. What is there given is not an Arnott's stove at all, but merely a distinct form of furnace for a flue; the furnace placed outside, not inside of the house. Hence the moveable lid at top is no disadvantage, which it would be were it inside of the house. The peculiarities of this furnace as compared with those in common use are, first its being fed from the top by a hinged lid, and, secondly, the moveable grating, as described in the case of the stove just spoken of. The height and smallness of the opening into the flue will insure a good draught, as no doubt there is a chimney at the other end. There is no mention of water-pipes, although no doubt they could be introduced if deemed desirable. The fact of the furnace being outside of the house does away with your objection to the size of the covering plate. One of 13 inches square would give 1½ inch all round the opening of 10 inches, which under the circumstances would be sufficient. We should have no objection to the 19 inches you consider necessary, except the greater expense of the plate and the greater weight and trouble in raising it. We advert to these little matters more particularly, as critics and improvers should be correct in their references.

Now, certainly, we would not approve of constructing such a furnace (stove) with a moveable top, in a pit 20 feet long, 7 feet wide, and 6 feet in height at middle over pathway, with or without the hot-water pipes for growing Cucumbers, as there would be danger every time the cover was raised to replenish the fire. If the stove must be inside and fed inside we would prefer the form of stove first referred to, at page 172 of last volume; but so liable are Cucumbers to suffer from the least back draught, that if for economy we wished the heat from the stove to be given to the house, we would construct it inside close to the wall, and have the feeding-door and ash-pit-door outside of the house. To get bottom heat either with or without a chamber, the stove must be sunk sufficiently low to let the pipes or flue ascend into it. For such a chamber two two-inch pipes would be necessary for early Cucumbers. The pipes should be near the top. See notice of such chambers at Berkhamstead Nursery in a previous volume.

It is always well to stick to the boat that carries us safely over the river. On this principle we would advise you to keep to the Riddell stove that does such good service. Even with that and its moveable top we would be a little timid as respects Cucumbers. It is very different as regards the low heat required in a greenhouse. We presume your stove has no water round its sides, but that you take the three-quarter-inch pipe from the stove. In such a case the fire must be pretty strong to heat so quickly a tank 8 feet long, 2 feet wide, and 4 inches deep. We know of no remedy against over-heating except stopping the circulation, enlarging the size of the tank, or careful firing. When once the requisite

heat is obtained, it can only be kept regular by a very slow combustion. This is best done by carefully regulating the air through the ash-pit-door. This is well adverted to at page 172 of last volume. In fact, that stove by care can be a stove of slow or rapid combustion just as it is desirable. But for your rather lofty chimney we suspect the 30 feet of a flue running horizontally across a yard would have been a difficulty. You are right in supposing that stoves without such an accessory do best with a very short horizontal pipe. Various modes have lately been described for getting rid of steam, vapour, &c. We trust you will now see that the plan for a furnace outside of a house is a different thing from a stove to be placed inside of a house, and that for these distinct purposes the plans would severally be efficient. The authors of these plans will, perhaps, offer further explanations if deemed necessary.—E. F.]

NEW STRAWBERRIES.

ON my return from a very pleasant ramble in England, where I saw as usual many beautiful and interesting things in connection with horticulture, I beg to submit to your readers a short account of several new kinds of Strawberries, based upon my own personal experience, and some of which have already been alluded to in this Journal. First on the list stand the following seedlings, raised by that eminent horticulturist, Mr. de Jonghe, and which, as Dr. Hogg rightly observed to me, "constitute a really new race," inasmuch as the fruit is so solid that it will safely travel almost any distance. This point has certainly long been a great desideratum, and its attainment is a decided step in the right direction, combined as it is with the other necessary requisites of a good dessert Strawberry. Who is the amateur grower that does not now know *La Constante*, succeeding so well in all parts of England as well as everywhere, and producing rich large crops of the finest fruit imaginable?

As there is, however, "no Rose," or scarcely any, "without a thorn," this splendid sort has one single fault—that is, the scarcity of the runners it produces, and this circumstance must prevent its being grown on a larger scale for market purposes, at least for many years to come. Thanks, however, to the persevering efforts of its raiser, we have now several kinds possessing all the high qualities of *La Constante*, together with the important improvement that they are growing more freely and may, consequently, be propagated as fast as any. These are:—*Souvenir de Kieff*, *La Fertile*, and last, but not least, *Léonce de Lambertye*. All three are of unquestionable merit, and ought to be not only in every private garden, but also in the field to supply the million.

Then we have *Bijou*, a most curious sort, and undoubtedly the prettiest and one of the best Strawberries ever raised. This sort, not being a strong grower and but a shy runner, will necessarily be confined to amateurs' gardens, and would be an excellent variety for ladies who take an interest in the useful pastime of growing Strawberries.

Of English novelties I beg to mention the following:—

JOHN POWELL (Royal Gardens, Frogmore).—A great acquisition and an immense bearer, of first-rate quality. I do not, however, consider it "Queen-leaved" nor "Queen-flavoured," as the Rev. Mr. Radclyffe stated in a recent Number. Nevertheless, it is a very useful sort and can be safely recommended to any one. Through the kindness of Mr. Powell, whilst in England I had occasion to taste some other seedlings raised in those magnificent gardens—viz., *Fairy Queen*, *Elton Improved*, *Cockscomb*, and several others, which will in due course be right welcome to all true frugarians.

INGRAM'S RIFLEMAN, such a grand Strawberry in most English soils, does not succeed here, the French climate being evidently too dry, and our sun too powerful for it. On the other hand, *Frogmore Late Pine* is a favourite here and thrives well.

THE PREMIER is apparently a very useful sort, large and good, and, what is not to be despised, an enormous cropper. I had runners of it late in the autumn through Mr. William Paul, every one of which produced three or four fruitstalks! What a crop may we consequently expect from strong established plants?

PRINCESS OF WALES (Knight's).—The earliest sort I know of, and quite as early as May Queen, but much larger and of exquisite flavour.

I must not conclude without mentioning Sir JOSEPH PAXTON, of which I saw a few berries on calling upon Mr. Turner, who, with his usual politeness, allowed me to taste them. This is another Strawberry worthy of general cultivation, and every amateur ought to be anxious to possess it, and will find it a worthy companion to President, sent out last year by Mr. Turner.—FERDINAND GLOEDE, *Les Sablons (Seine et Marne), France.*

CITY GARDENING IN NEW YORK.

ONE of the most pleasing features in this city is the number and variety of shady trees planted along the side walks of many of the principal streets and avenues, and, being almost entirely deciduous, they form a most grateful shelter from the scorching rays of the sun during the sultry summer months; and never has their shade been more agreeable than during the last week of the past month (June). The thermometer in the shade during that period daily indicated 95° and 97°. One day, the 26th, it ranged up to 102°—an almost unprecedented heat for June; so that when at length the temperature fell to 75° we almost shivered with cold, and had to resume thicker habiliments.

The principal varieties of trees planted are Catalpas, Sycamores, Paulownias, Ailanthus, Hickory, Maples, Locust, Elms, Lindens, Horse-Chestnuts, Willows, Tulip Trees, Buttonballs, deciduous Cypress, &c. Besides doing good public service as shady trees, many of these are highly ornamental. Two weeks ago the Catalpas were one mass of bloom, and, having a broad umbrageous foliage, they would be most pleasing objects for the eye to rest upon anywhere, and are especially so in a crowded city like this. The Paulownias flowered very profusely in May and June, setting very freely; but the Chestnuts do not flower with the same rich profusion that I have seen them do at Hampton Court.

These useful and certainly most inexpensive public servants have most ruthless enemies in several varieties of caterpillars, which attack them in early summer while the leaves are yet tender, and seriously endanger their utility. I have seen many trees of Maples, Lime, Chestnut, and Willow almost entirely denuded of their foliage; and just now these present rather a curious appearance, having again clothed themselves with fresh foliage, in striking contrast to some of their neighbours, which enjoyed perfect immunity from the "flank movements" of the caterpillars. The Ailanthus, Catalpa, and Paulownia are untouched. Of these the graceful Ailanthus is most extensively planted, the only objection to it being the sickly odour emitted from the flowers when in bloom; but this is not the case with the male variety, which is now much sought after. The foliage being of a much lighter tint, it is readily distinguished from the other. The public squares are also well planted with trees and shrubs, and just now the colour of the foliage is most refreshing to look at.

The other evening, taking a stroll in the "gloamin" through Union Square, it was pleasant to behold thousands of the people walking about and sitting under the trees enjoying the fresh breeze in the cool of the evening, the water sparkling in the fountain, and the beauty of the whole scene much enhanced by myriads of brilliant fireflies flitting about, making the gas lamps for the prosaic and unnecessary purpose of lighting the square look like a most decided artificial innovation on nature.

As an instance of the perfection to which city gardening may be carried under many existing difficulties, we have the compact and most judiciously arranged establishment of R. Stewart, Esq., in Fifth Avenue, presided over by his gardener, Mr. Davidson, where just now the grass is as green and close-shaven as any nobleman in England could wish his ancestral lawn to be; and this is the more creditable, as we have had no rain, with the exception of a passing shower, for fully two months. The show of spring bulbs in the flower garden here would have delighted even the noble proprietor of Cliveden. The Hyacinths in particular were gorgeous, not only as a general mass, but also for individual spikes; and in June the Roses were also very fine, but only

too shortlived, the hot weather soon making sad havoc with this favourite flower. A botanist might also light upon some native varieties of plants stowed away in a corner, the pickings of many a botanical ramble of a brother of the present gardener.

This, although perhaps the most striking, is not by any means a solitary instance of successful city gardening; and the taste for such is rapidly developing on this side of the Atlantic, in spite of the many drawbacks at present existing.—DAVID FOULIS, *New York.*

ORCHARD-HOUSES IN THE NORTH.

I REGRET to find that Mr. Rivers has awakened the ire of our brethren in Yorkshire. Mr. J. Acomb, as the mouth-piece of the offended party, has shown that fine Peaches can be grown near large manufacturing towns. I could name more than fifty places in the heart of the West Riding, where Peaches and Nectarines are grown quite equal to any produced elsewhere, and I have no doubt whatever as to their being much superior to any grown in orchard-houses in much more favourable localities farther south. But their being grown under glass has nothing to do with the question. "Have they been grown in houses of simple construction without artificial heat?" I have given my reply in the negative, and it has only been met by confirmatory evidence. True, we are told that such orchard-houses have succeeded in some places, but questions of import are not settled by isolated cases, but by the majority.

Within a circle of some ten miles in diameter I find twenty-three orchard-houses, and nothing like successful Peach-growing to be seen in any of them, being nineteen in favour of the "ayes." More than this, a nurseryman travelling to and fro in the north writes, "I have seen many of these houses, but never found a crop of Peaches in any of them," adding, "I have no doubt that Peaches can be grown, but the question is not what can be, but what is." So with Peaches at and near Bradford; Peaches are grown successfully in many places in heated houses; and even without such assistance, when protected with a substantial wall, you may see them in almost every garden of note; but we must travel over one hundred miles of country to Liverpool or Nottingham, or, if we like it better, have a two-hundred-mile ride to Herts, to see that which is said to be grown in many places in the north, still nobody knows where, and when we ask where, we are told to go to the places named. We are to go to France to see what will enable us to overcome the difficulty of the situation. We are to shut our eyes to the fact, that our neighbours have abundance of Peaches in houses constructed so as to be suitable for the climate; and whilst we have nothing but a structure totally inadequate for the purpose intended, and knowing what will enable us to overcome the difficulty, we must avail ourselves of the orchard-house without telling those who furnished the "wrong thing," that we are not pleased with it. Very few persons having spent £100 on an orchard-house, and after much annoyance, like to be told that it is unsuited for growing Peaches, and will require an outlay of £50 to make it suitable for their production.

Passing over the lucubrations of "PENDLE," and others, not excepting my other opponent, "WYESIDE," I come to what may be taken as the arbitrary charge of the judge to the jury, or an explanation of some questionable point of law. I allude to the Editors' note appended to my reply to "WYESIDE," at page 8.

The superiority of fruit grown under glass over that on walls, results in their being "nearly" as fine, luscious, and high-flavoured as the best ever grown against a wall. Their inferiority is admitted. Point 1, Fruit ripened naturally is superior to that produced by artificial means, is therefore conceded. Mr. Pearson will be pleased to take notice that his superiority dwindles into nearly equal. There is a great deal of difference between nearly equal, equal, and superior.

The question of light is also conceded. Point 2, Peaches under glass receive less light than those on a south wall. "WYESIDE" will, of course, take cognisance that my palpable error is admitted to be correct.

As to the other points in dispute, which I will term point 3, that orchard-houses for the growth of the Peach

and Nectarine must be heated in the north, has not been met by any evidence whatever to the contrary, and yet we are asked to believe that Peaches are so grown (without heat) in many places. More besides me ask where? The evidence being twenty-three cases of failure in a circle of ten miles, to four of success in the whole north, this point is claimed also.

Point 4, a wall covered with glass is better than an unheated orchard-house, span or lean-to, or is not equal to a wall covered with glass for the production of Peaches or Nectarines. No evidence against this is furnished, but Mr. Pearson strives to make it appear that I advocated the building of walls in preference to erecting orchard-houses. My argument was and is, that Peaches and Nectarines have been grown, and can be now, on walls with equal certainty to those in orchard-houses with wooden sides and ends and a glass roof. As for Apricots, they are grown more abundantly and with greater certainty on cottage walls than in orchard-houses. I do not think it necessary to show why a wall covered with glass should be better suited for protecting a Peach tree in the north than a frail structure of wood and glass. If you build brick walls to your orchard-house instead of wood and otherwise make it such as has been employed for generations for the growth of Peaches under the designation of a Peach-house, and call it an orchard-house because the trees are in pots or planted out, yet trained as standards, bushes, or pyramids, I think you would be better thought of if you were to give things the same name as that by which our forefathers knew them.

I now retire from the controversy; and if anything like wounds are felt, I can only hope that they will soon heal kindly and no pain be given when the sore is touched afterwards. I have done with the subject.—G. ABBEY.

EVIDENCES OF PROGRESS.

We are told that in a religious periodical recently appeared a dirge, entitled "Pray for Daventry," and we consequently inquired what calamity had befallen the place. The reply was neither clear nor satisfactory, but we waived further inquiry, for we knew that we should ere long be at this Bannavenna of the Britons; and that visit being now passed, we will note down a few facts which lead us to the conclusion that the place is not altogether in a state abandoned—and improvable only by prayer.

Talking over the recent discussion in our pages about "foul brood," and inquiring if it had been noticed in the neighbourhood of Daventry, we were referred to a Mr. Piddington, and in search of that authority we at once set forth. We found in him an example of that higher class of artisan which was so rare fifty years since, that it may be considered as a creation of the last quarter of a century. "The schoolmaster being abroad" among artisans, facility of intercourse with other places by the agencies of the railroad and penny postage, have raised this class from the mighty multitude of English artisans. These artisans have ever been distinguished for acuteness, thirst for information, and mental independence. The agencies we have mentioned placed the acquirement of knowledge within the easy reach of them all; and those of them who had minds most capable of improvement, and who were most sedulous to improve, form that high class of artisan of which Mr. Piddington is so good an example.

We should not be justified in particularising all we noticed, but we may say the neatness and comfort diffused over his home, and the attention to arrangement and harmony of colour in the small flower-beds of the small garden, indicated a well-ordered mind and a cultivated taste—such comfort, and neatness, and beauty, would not have been there if not fully appreciated. We will only particularise of the garden that we never saw anywhere else the edging of the leaves of Geranium Golden Chain so brilliant.

The apiary was in excellent order, and "foul brood" unknown in it, though a greater number of dead larvae have been thrown out this year than is usual. There are about twenty stocks in the old-fashioned straw hive, seven in Marriott's hives, and one in a box-hive of Mr. Piddington's own devising. The old-fashioned hives he will gradually supersede, and he is about changing them all to a southern

aspect, which he finds by far the best—there the bees being stronger, and their honey-harvest the largest. From his seven Marriott's hives he has this season taken more than 100 lbs. of honey in bell-glasses, yet the store for winter in the hives is ample.

Last year we visited the Horticultural Show at this town; and this year we reached it on the day of its annual Gooseberry Show, but too late to see the fruit exhibited.

In the course of our rambles round we reached Norton Hall, the seat of the late Mr. Boutfield, one of the Vice-Presidents of the Linnean Society; and we must record our hope that Mr. Smalley, the intelligent manager and gardener, will be permitted to complete the improvements—the great improvements—which were in progress when Mr. Boutfield died. They are worthy of the family motto, "*Jay domne cause*," and so is the transformation of the cottages around. They were miserable hovels; but now they are all substantial, comfortable dwellings, looking respectable, and fostering that good preservative from evil—self-respect.

The maternal grandfather of the late proprietor was the celebrated Dr. Withering, author of the "*Arrangement of British Plants*," and we note this for the purpose of recording that an excellent portrait of him is among the numerous pictures in the Hall. He is seated with a stem of the Fox-glove (*Digitalis purpurea*), in his hand, for the use of which in medicine he was an early and efficient advocate.

Many other notes have we of progress in and about the town, but they are of a character not the legitimate themes of our columns, but the instances we have glanced over are sufficient to testify that there is something to be thankful for as well as to pray for at Daventry.—G.

EFFECTS OF SMOKE ON VEGETATION.

DR. VOELCKER lately read a paper on "Smoke and its Effects" before the School of Arts, and the following is a passage from his lecture which especially interests the agricultural reader:—

"Wheat, Barley, Grass, and Clover, exposed to a smoky atmosphere at an early stage of their growth, are visibly affected in a short time. The tops of these plants turn first red, then yellow, and finally white, and an effect is produced not unlike that caused by frost or excessive drought. Corn crops affected in this manner by smoke may recover to a certain extent, but they never yield well, inasmuch as the development of the plants becomes irregular, and the corn ripens unequally. If cereals are attacked by smoke when in flower, the ears do not fill well, and the grain is of a poor quality.

"Grass and Clover, more or less discoloured or bleached and damaged by smoke, are disliked by cattle, and often rejected by them altogether. Smoke deteriorates the quality and diminishes the quantity of Grass and Clover crops. Plants with strongly developed leaves—for instance, Mangolds, Swedes, Turnips, and other green crops—are less liable to suffer injury from a smoky atmosphere.

"Fruit and ornamental trees, on the other hand, are readily affected by such an atmosphere. The leaves turn yellow, brown, and finally black, and then drop. If the leaves are destroyed two or three years in succession, the trees become sickly, and finally die off. Fruit trees in blossom attacked by smoke yield no fruit, or but a poor sickly crop.

"During the combustion of coal much sulphurous acid is generated, which is carried away by the smoke of the fire. The injurious effects of smoke on vegetation are evidently due to sulphurous acid—a gas which, according to experiments made many years ago by Turner and Christison, causes the leaves of plants to drop when it is present in air merely in the proportion of 1-10,000th part.

"Recently, experiments on the effects of air containing small quantities of sulphurous acid upon vegetation have been made in Germany by my friend Professor Stockhard, of Tharand. Young Fir trees exposed two or three times for two hours to air containing only 1-20,000th, or even 1-30,000th, of sulphurous acid gas were completely bleached in wet weather, and killed when they were exposed for a longer time to air containing so small a quantity of sulphurous acid.

"In dry weather a much larger quantity of this acid may be present in the air without doing any injury to plants. It is in wet weather that air containing only traces of sulphurous acid is injurious to vegetation. In localities where much coal of inferior quality—generally rich in iron pyrites—is burned, the injury done to vegetation by the sulphurous acid proceeding from such coal may often be seen at a distance of from one to two miles from the place where the smoke is generated.

"Farmers residing in a neighbourhood where brick-kilns and potteries abound frequently sustain much more injury than they are themselves aware. The quantity of sulphurous acid emanating from open brick-kilns is very considerable, and there cannot be any doubt that in certain localities the air is poisoned with sulphurous acid gas to an extent which prevents the healthy growth of Wheat, Barley, or Oats—so that good crops are rarely seen in such localities, and blighted ones are quite the rule.

"By a recent Act of Parliament provision is made for the effectual condensation of muriatic acid gas in alkali works; but, as far as I know, there is no law which prevents brick-makers throwing into the air any quantity of sulphurous acid which they choose, although it is more pernicious to vegetation than even muriatic acid gas. I have had many opportunities of becoming practically acquainted with the injurious effects which a smoky atmosphere produces on our cereal crops, and regard a strong deposition of soot on Wheat and other crops quite a sufficient evidence of the more or less complete injury which the crops must have suffered by the sulphurous acid always present in the air in districts where such sooty deposits are seen on plants. The disadvantages of carrying on agricultural pursuits in the potteries, or in districts where volumes of black smoke discharge enormous quantities of sulphurous acid into the air, are well known amongst the more intelligent and enterprising farmers. This fact explains to a certain extent the backward condition of agriculture in such localities, and loudly calls for a mitigation of the evils to which farmers are exposed who have the misfortune to occupy land in the immediate neighbourhood of large manufacturing towns, or in localities where immense quantities of inferior coal are consumed by brick and tile makers, and manufacturers of earthen and stone ware, &c. Again, in districts where copper ore, consisting for the greater part of the sulphurets of copper or iron, are the raw materials from which copper-smelters extract the metal, enormous quantities of sulphurous acid are discharged into the atmosphere.

"The injury done to vegetation by the smoke from copper works has been traced beyond a distance of four miles. It is true that smoke from copper works generally contains appreciable quantities of arsenic, which, of course, is inimical to the health of plants; but as the arsenical fumes are insignificant in quantity in relation to the large amount of sulphurous acid which is produced in roasting copper ores, and as air containing 1-40,000th or even 1-80,000th part of sulphurous acid gas is decidedly injurious to vegetation in wet weather, I think the sulphurous acid of copper smoke does more mischief to the crops in the neighbourhood of the works than the arsenical compounds of the smoke. Just as little as alkali-makers are permitted to discharge muriatic acid into the air, copper-smelters should be allowed to discharge into the air the enormous quantities of sulphurous acid which is produced in roasting certain copper ores. It may, perhaps, not be possible to condense sulphurous acid so perfectly or as readily as muriatic acid gas, and probably the arrangements for the condensation of the former will be found altogether inappropriate to effect the condensation of the latter, but attempts to mitigate the evil resulting to vegetation by sulphurous acid fumes should be seriously undertaken.

"It has occurred to me that the sulphurous acid fumes of copper works might, perhaps, be converted economically into sulphuric acid, or be used for the production of sulphite or hyposulphite of soda; and I do not consider it improbable that one of these days this highly injurious product will cease to be a nuisance to the inhabitants of the country round about the works, and be turned to good economical account.

"As regards the actual quantities of sulphurous acid gas contained in the smoke of brick-kilns, we possess no data

for our guidance. The quality of the coal used, the construction of the kiln, and the composition of the clay of which the bricks are made, must affect to a great extent the proportion of sulphurous acid in the smoke. Thus a coal with a high per-centage of sulphur, but containing also much mineral matter, on burning may produce less sulphurous acid than another kind of coal, poorer in sulphur and in mineral matter, inasmuch as the greater portion of the sulphur is fixed by the mineral portion of some coals. Again, if the clay contains magnesia or lime, or is purposely mixed with chalk, most of the sulphur of the coal will be fixed by the magnesia or lime.

"The brick-makers in the neighbourhood of London, who use with the clay a considerable proportion of chalk, therefore produce a smoke which contains but very little sulphurous acid; whilst in districts where fire-bricks, tiles, &c., are largely manufactured from clay that does not contain lime or magnesia, or merely insignificant quantities, the air becomes charged with sulphurous acid to an extent which injuriously affects the vegetation for miles round the brick clamps or kilns."

ROYAL PARKS AND PLEASURE GARDENS.

AN estimate of the amount that will be required to defray the charges which will come in the course of payment during the year ending 31st of March, 1865, for maintaining and keeping in repair the walls, keepers' lodges, and other buildings, the fences, roads, rides, drives, footpaths, plantations, &c., in the several Royal Parks, Pleasure Gardens, &c., under the management of the Commissioners of Her Majesty's Works and Public Buildings.

This estimate is limited to such expenses in the several royal parks and gardens as are requisite to maintain them for the public use. Expenses not connected with the appropriation of the parks and gardens to strictly public purposes, are provided for in the estimate for "Palaces."

	£	s.	d.
Albert Road, Regent's Park	1219	14	6
Battersea Park	6346	2	6
Bushy Park	2760	8	5
Chelsea Hospital Grounds	1657	10	2
Chelsea Military Asylum Grounds	138	17	9
Greenwich Park	1977	15	2
Ditto (Department of the Ranger)	408	4	0
Hampton Court Park	980	19	0
Ditto Pleasure Gardens	1803	10	1
Ditto Roads	953	0	0
Holyrood Park	2074	19	6
Kennington Park	1584	13	2
Kennington Gardens	4076	5	1
Kew Botanic Gardens	15339	16	8
Kew Pleasure Gardens	4612	11	8
Longford River	1051	0	0
Regent's Park	9964	7	4
Richmond Park	3209	2	9
Ditto (Department of the Ranger)	2835	3	0
Richmond and Kew Roads	1241	15	8
St. James's, Green, and Hyde Parks	25506	12	5
Ditto (Department of the Ranger)	1796	9	5
Victoria Park	5934	7	2

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Amount voted for the year ending 31st March, 1864, £97,952.

NOTE.—The income derived from the Royal Parks and Gardens is paid into the Consolidated Fund. The amount so paid in for last year was £3527 15s.

SIR W. J. HOOKER'S REPORT ON KEW GARDENS.

Royal Gardens, Kew, W., 1st January, 1864.

As was to be expected, the number of visitors to the Royal Gardens during the past year was below that of 1862, the year of the International Exhibition, and is as follows:—

Number on Sundays	188,494
Number on week-days	214,934
Greatest monthly attendance (July)	98,315
Smallest monthly attendance (January)	1,768
Greatest week-day attendance (25th of May)	11,631
Smallest week-day attendance (24th of November)	2
Greatest Sunday attendance (31st of June)	12,441
Smallest Sunday attendance (11th of January)	38
Good Friday (3rd of April)	9,798

Total..... 401,061

The number of intelligent visitors of all classes who frequent the museum and plant-houses for purposes of instruction have increased; and this has been even more the case with scientific visitors.

BOTANIC GARDENS.

The only important change effected has been in the great Palm-house, where three of the largest Palms, having reached the top of the house, 60 feet above the floor of the building, have had to be removed; this has been done without any accident, and their places filled by younger and rarer plants.

In last year's Report I mentioned the occupation of the great architectural hothouse, No. 1, by the broad-leaved Aroids, and other tropical plants of fine foliage. These are already growing most luxuriantly, and I anticipate that this building will eventually prove perhaps the most instructive and attractive of its kind in the Gardens. In the course of the present year it is proposed to add to its other contents a selection of tall Tree Ferns, slender-stemmed Palms, and economic plants.

Measures have been taken under the direction of the Clerk of the Works, to improve the condition of the ornamental piece of water opposite the Palm-house, which had become very foul during the hotter summer months; and an arrangement has also been made for a larger general supply of water. Flower-beds have been carried round the geometric shrubberies on the west side of the Palm-house, and on both sides of the semi-circular walk skirted by the Yew fence. Many rare and ornamental young trees have been planted on the east side of the main walk leading from the great gates. Beds of Rhododendrons will be planted on the opposite side of the same walk. It is further intended during the ensuing summer to sink in the ground on each side of the same walk a row of such small Palms, Aloes, Cycads, and other rare and conspicuous plants in pots (with their names) as can be safely exposed. This arrangement will, it is hoped, not only give this part of the garden a most ornamental appearance, but also exhibit to the public a series of curious and striking exotic forms of vegetation in the most effective manner.

The Reports on the success of Mr. Markham's introduction of Cinchona Plantations in India, and in the establishment of which (including the colonies) the Royal Gardens have taken so large a share, are very satisfactory. Mr. Markham informs me that in the nurseries on the sites selected by him on the Nilghiri hills, only three years ago, there were, on the 1st of December last, 259,396 plants, of which 66,622 were planted out; that the tallest plant is nearly 10 feet high; that two plants of *C. succirubra* are in full flower; and, further, that 6,562 plants have been distributed to private individuals.

The bark from some plants has been analysed by J. E. Howard, Esq., and the results have been entirely satisfactory.

In the Darjeeling plantations, Himalaya, under the superintendence of Dr. Anderson, there are 8000 plants, and private applications for plants have been made to that gentleman for the enormous number of 1,500,000.

In Ceylon, under the charge of G. H. K. Thwaites, Esq., there are 22,050 plants; in Jamaica, under the care of Mr. N. Wilson, 400; and in Trinidad, under Dr. Cruger, 24 plants. In the two latter colonies no attempt appears to have been made as yet to increase the stock by cuttings, a method so advantageously adopted in India.

Steps have been taken, at the request of the Government of South Australia, to introduce the Cork tree into that colony. A large quantity of young plants are being raised in the pleasure ground nursery for transport, and will be sent out in a growing condition, in glazed cases, in the early spring. For procuring the acorns we are indebted to Dr. Welwitsch, Messrs. Vilmorin, of Paris, and H.M.'s Consuls at Oporto, Barcelona, and Marseilles.

Large collections of semi-tropical trees and shrubs have been sent, at the request of the Admiralty, to the once desert island of Ascension, the upper parts of which are now clothed with trees and shrubs, chiefly derived from Kew; and I continue to receive from Captain Barnard the most satisfactory accounts of the thriving condition of these plants, and the consequent rapid increase of the fertility, water supply, pasture land, and vegetable produce of the island. The Bermuda Grass especially, which was sent from this Garden several years ago, has now become the staple fodder of the place.

Large collections of living plants and seeds have been

sent to the island of St. Helena, at the request of the Governor of that island.

An active correspondence and exchange of plants has been kept up with Ceylon, Mauritius, Queensland, Calcutta, Victoria (Australia), Trinidad, and various nursery establishments at home and on the Continent.

Besides these ordinary sources of supply, valuable collections of living plants and seeds have been received from the Rev. C. S. P. Pariah, of Moulmayne; Mr. Hill, government botanist in Queensland (including a living plant of *Bowenia*, a new and most remarkable Cycad); G. Mann (government botanist), West Africa; Dr. Welwitsch, Loanda; J. J. Monteiro, Esq., Angola; Mr. Hutton, South Africa; Dr. Atherstone, Graham's Town; Dr. Imray, Dominica; Dr. Hillebrand, Sandwich Islands; Commodore Lord John Hay, China and Japan; C. H. Williams, Esq., Bahia; His Grace the Duke of Wellington, germinating seed of the double Cocoa-nut (which, however, we have failed to rear); Dr. Kirk, live plants collected during Dr. Livingstone's expedition, and others in the Seychelle and Comoro Islands, &c., including fruit of the double Cocoa-nut.

PLEASURE GROUNDS.

The principal works to be reported on are the completion of the centre of the temperate house, and the transfer to it of all the plants destined for it from the old Orangery, and other buildings in the Botanic Gardens. These, which are for the most part planted in the ground, have already begun to grow vigorously, and will soon present a noble appearance. The heating apparatus works well, and the construction of the building appears on the whole to be most satisfactory; the only exception that must be made is with regard to the opening and closing of the sashes of the roof, which will require more care and skill to keep in order than was anticipated by the builders.

Extensive plantations of trees and shrubs have been made in various parts of the pleasure grounds; and large beds of Rhododendrons, and rare trees and shrubs, are now being made along the banks of the new lake.

The chief contributions to the Arboretum have been—

Japan seeds, from Mr. Oldham, collector for the Royal Gardens, W. J. Elliott, Esq., Sir E. Alcock, &c.

Amoor River, Chinese Manchurian, and Siberian seeds from the Imperial Gardens of St. Petersburg.

Australian seeds from J. Oldfield, Esq., Dr. Mueller, Government Botanist at Victoria, and others.

Himalayan seeds of Pines, Oaks, &c., from Dr. Anderson, F.L.S., of Calcutta, and Dr. Cheghorn, F.L.S., Inspector of Forests.

Seeds from the Nilghiri Mountains, from Mr. McIvor.

Many very fine and rare greenhouse plants from James Bateman, Esq., F.L.S., of Congleton.

MUSEUMS.

The old Orangery, so long condemned as a house for purposes of cultivation, and at last emptied by the transference of its contents to the temperate house, is now chiefly occupied with the magnificent collection of timbers, cabinet and furniture woods, from the Great Exhibition of 1862. In my last year's Report I described this collection in some detail, and enumerated the colonies and donors of the several contributions of which it consists, among which Tasmania holds the most conspicuous place for the magnitude and beauty of its specimens. Though now mostly in their places, much remains to be done during the coming year towards the fittings of the building, and the final arrangement, ticketing, and cataloguing of the collection.

The additions of importance to the Museum during the past year are:—

A specimen of Herne's Oak, presented by Her Majesty the Queen.

A collection of articles (umbrella-stick, knife-handles, &c., made of *Laminaria*, or the stem of *Laminaria buccinalis*), a gigantic seaweed of South Africa. From T. G. Ghislain, Esq.

A Fakir's richly carved drinking vessel, made of the shell of the double Cocoa-nut, together with carved articles of Shola-pith. From the Hon. W. E. Frere, Esq., of Bombay.

Articles used as barter for Palm oil with the natives of West Africa. From M. L. Levin, Esq.

Specimens of Pine Cones, Woods, &c., of North Asia. From Dr. Regel, Imperial Gardens of St. Petersburg.

A beautiful series of specimens, illustrating the mode of growth of the Mistletoe on Maple, Poplar, Hawthorn, &c. from Dr. John Harley, F.L.S.

Many curious and interesting tropical African vegetable products from Mr. Mann, Dr. Livingstone, Kirk, Møller, Captains Speke and Grant, &c.

A large collection of Barks used as drugs by the natives of British Guyana, collected by Mr. Appun, under the orders of the Colonial Government.

HERBARIUM AND LIBRARY.

Our duties in this department have rapidly increased of late, owing to the demands made upon this establishment by the various departments of Her Majesty's Government; to the number of plants sent to us, almost daily, for naming, and other information regarding them; to the receipt of large collections from several important government expeditions; to the applications for assistance and advice on the part of young gardeners and others proceeding to take charge of plantations of Tea, Cinchona, Cotton, Coffee, &c., in India and the colonies; and the redoubled activity of the Colonies in the publication of their Floras, which, though paid for by the Colonial Government, can only be prepared at Kew, or by persons in direct and constant correspondence with its Herbarium and Museums.

I have to commence my Report on this head with the announcement of the retirement of Mr. Allan Black, so long and so well known, both here and on the Continent, as the able, assiduous, and most obliging Curator of the Herbaria. Owing to the failure of his health, brought about by over-application to his duties, he has been obliged to seek a warmer climate. Most fortunately, the curatorship of the Government Gardens at Bangalore (held by a late foreman in the Royal Gardens) fell vacant at this time, and he was at once nominated to the vacancy. Our inability to find a person capable of filling Mr. Black's place at his salary, no less than the increased duties of this department, have necessitated a rearrangement of the present wholly inadequate staff, and a permanent addition to it. Professor Oliver, the Librarian, will henceforth take the joint duties of Keeper of the Library and Herbaria, and will have two assistants; he will at the same time continue his voluntary courses of lectures to the foremen and gardeners, which he has hitherto conducted with so much credit to himself, and benefit to our young men.

It is impossible, within the limits of the present Report, to do more than allude to the chief public duties performed at the Herbarium during the past year, which are as follows:—

Dr. Kirk, the surgeon and naturalist of Dr. Livingstone's expedition, arrived in England in October, and has been much engaged in the investigation of his large and valuable collections, both in the Museum and Herbarium.

Mr. Mann arrived in June from his three years' arduous and perilous botanical journey on the West Coast of Africa (including two ascents of the Cameroon Mountains, which he was the first to explore), as well as the Peak of Fernando Po, St. Thomas, Prince's Island, the Sierra del Crystal, &c. His plants, amounting to about 3000 kinds, have been all arranged and catalogued, and the duplicates distributed to the Museums of America, Paris, Austria, Prussia, Russia, Holland, Hanover, &c. He has recently been appointed assistant curator of the Government Cinchona Plantations at Darjeeling in the Himalaya. His mountain plants have been described by Dr. Hooker, and are being published by the Linnean Society.

The British Herbarium of the late W. Borrer, Esq., presented in 1862, has been arranged by Professor Oliver.

Captain Grant's interesting collection, made during Captain Speke's expedition to Central Africa, have been brought to Kew, and have been named by Dr. Thomson, F.R.S., and published in the Appendix to Captain Speke's Travels.

Dr. Welwitsch, of Lisbon, the distinguished botanist, and explorer of the interior of Angola and Loanda, in Western tropical Africa, having been commanded by His Majesty the King of Portugal to take his collection to Kew to be named, has lately arrived with an immense Herbarium, in a most beautiful state of preservation, from those hitherto totally unknown parts of the world, and the first set is to be presented to this Herbarium.

Sir Charles Wood, Secretary of State for India, having directed the Flora of the British possessions in India to be proceeded with on the same plan as the Colonial Floras; this work (which will contain descriptions of at least 12,000 species of plants), has been commenced in the Herbarium by Dr. Thomson, F.R.S., late Director of the Royal Gardens at Calcutta.

Of Drs. Harvey and Souders' Flora of our South African possessions, the second volume is completed, and the third is in progress.

Of the Australian Flora mentioned in my last report (and which will extend to six or seven volumes, containing as many thousand species), the first volume has been published by its author, G. Benthams, Esq., F.R.S., and the second is making rapid progress.

The Flora of the British West Indian Islands, by Dr. Grisebach, has been completed during the past year, all but the Index. It contains descriptions of 3000 species of plants.

Mr. Thwaites' Enumeration of Ceylon Plants is nearly completed, and embraces upwards of 2500 species.

The "Genera Plantarum" of Mr. Benthams and Dr. Hooker is progressing as fast as the authors' other duties permit, the second part being half completed.

Dr. Hooker has been desired by the Colonial Government of New Zealand to prepare a Handbook of the Flora of that interesting group of plants. One volume is now in the press, and will be published early in the spring.

The "Species Filicum" is finished in five volumes, containing upwards of 300 plates; but a Supplement is about to appear, containing the new species that have been discovered since the commencement of the publication, together with a synopsis of all known species.

The Botanical Magazine has been conducted as formerly; the 89th annual volume, containing 72 coloured figures, and descriptions of new, rare, or interesting cultivated plants, is published.

Various papers by Mr. Benthams, Professor Oliver, Dr. Thomson, Dr. Hooker, &c., on some of the most interesting contributions to the Herbarium, especially African and Indian Plants, have been published by the Linnean Society of London.

Other botanists who have worked in the Herbarium during the past year are Professor Babington, of Cambridge (British Rubi); the Rev. W. W. Newbold (British Plants); Mr. Edgeworth (North-West Indian Plants); Dr. Aitchison (Panjab Flora), &c., &c.

The principal contributions to the Herbarium have been:—An extensive collection of Borneo Palma, collected by Hugh Low, Esq., and presented by Messrs. Low, of Hackney.

Large collection of Mauritius and Madagascar Plants, made by the late Judge Blackburn, and presented by Admiral Sir W. Bowles, K.C.B.

The most extensive Herbarium of Indian Plants, made by Dr. Wight, F.R.S., during thirty years residence in the Madras Presidency, Nilghiri Mountains, and other parts of the western Peninsula of India; and containing the original specimens from which his numerous and most important botanical works have been written. Presented by himself.

Very large and important collections made in all parts of extra-tropical and sub-tropical Australia and in Tasmania, by A. Oldfield, Esq.

The Portuguese and Azorean Herbarium of the Baron do Castello de Paiva, presented by that nobleman.

HAUTBOIS.—I believe Mr. Knight is right about the derivation. It is *Fragaria elatior* (higher in its stalk), and hence it is called Hautbois. The name may also be derived from the plant being found in high woods and deep forests.—W. F. RADCLIFFE.

WOOD PIGEONS.—I hope you will suggest some practicable means of getting rid of a plague of wood pigeons, which light upon the Gooseberry bushes in scores, breaking the branches, and strewing around all the Gooseberries. Query, Are they in search of caterpillars? The most cunning sportsman cannot shoot them, they are such wary birds.—A. B.

CULTIVATION OF THE MELON.

(Continued from page 64.)

Of the appliances employed for growing Melons none are in more general use than an ordinary frame on a dung-bed, which is represented in *fig. 2*. *a* Is a common frame 2 feet

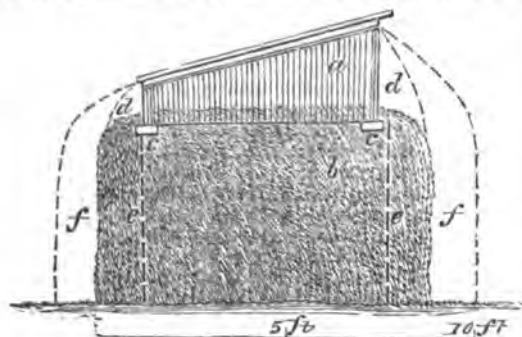


Fig. 2.

high at back, 1 foot high in front, and 6 feet wide, placed on the hotbed *b*, and resting on bricks at each corner, *c c*. The dotted lines, *d d*, show how far the frame is to have dung piled up against the sides to maintain the top heat when the bed loses its heat considerably, or when a greater depth of soil is placed on the bed. The dotted lines, *e e*, drawn perpendicularly through the bed, show those portions of the bed which are to be taken away when it becomes necessary to line the bed from the bottom, to renew the heat when declining; the space between *e e* and the dotted lines, *f f*, being filled with dung prepared in the same way as that for making the bed. The lining should not be applied at front and back at one time, but in front first, before the heat of the bed declines too much; the back lining may follow the front in about ten days or a fortnight. Linings to the bottom are only needed for early beds, and not always even then in mild seasons, for the frame will sink into the bed, and it will consequently be necessary to raise the frame up at intervals of a fortnight or three weeks, so as to keep the glass at a proper distance from the plants, or 1 foot above them. Raising the frame about the thickness of a brick each time will be sufficient, and this, with the removal of some of the spent lining, will leave a space by the sides of the frame in which some fresh hot dung can be placed, which will generally furnish sufficient heat without having the bed to line from the bottom. If, however, the heat is not maintained by top linings, the bed must be lined from the bottom before it becomes so cold as to place the well-being of the plants in jeopardy.

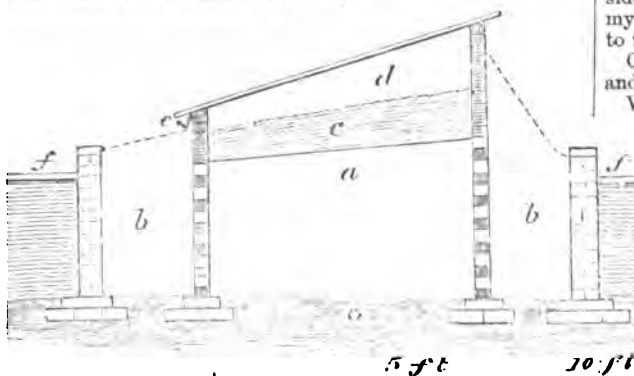


Fig. 3.

Probably the best mode of growing Melons by fermenting materials is that of a brick-pit (*fig. 3*), the inner walls pigeon-holed to admit the heat from the linings, *b b*, to pass into the bed *a*. The inside between the two inner walls is filled up to the rafters in the first instance with hot dung, prepared, sweetened, and well beaten down and trodden at the sides. The lights being put on, the bed will be ready for

soiling in a week or ten days, previously levelling it, and adding more dung if necessary to bring the surface of the dung to within 1 foot of the glass. The soil is then placed under the centre of each light, so as to form a cone with a flattened top, the latter being only an inch or two from the glass. By the time the bed is earthed the dung will have settled, and when fully earthed it will present the appearance shown in the figure, *a* being the bed, *c* the soil, and *d* the open space for the development of the plants. *b b*, Are spaces 2 feet 6 inches wide, in which hot dung is placed; first in front about ten days after planting the Melons in the bed; and, secondly, at the back about ten days afterwards. The dung must at all times be kept higher than the pigeon-holes, and the soil within the pit should be kept close to the sides of the frame, otherwise the steam of the dung of the linings will pass into the pit and destroy the plants. The linings will require renewing, and additions of fresh dung to keep up the proper temperature according to circumstances. The linings should be brought up to the dotted line, and if they are covered with wooden shutters the heat is greater, and a cleaner appearance is given. *e* Is a spout to carry off the water, and *f f* is the ground level.—G. ABBEY.
(To be continued.)

HARDY BEDDING PLANTS WITH VARIEGATED AND COLOURED FOLIAGE.

In addition to Mr. Abbey's list, I would suggest:—

FILBERT, DARK COPPER-LEAVED, which is very distinct, dwarf-growing, and bears cutting-in well.

SALIX CAPREA VARIEGATA.—With white, green, and light brown leaves. Bears cutting-in well; strikes in a little bottom heat in a fortnight, and so might be planted for a line in a ribbon to be renewed every third year, or in most soils cuttings may be planted where required.

Both of the above would, in windy situations and in the back beds, if allowed to remain, afford an ornamental shelter of 18 inches to 2 feet or more in height.

BRAMBLE.—The Silver-leaved is very effective, but needs attention to keep it neat. I have a large-leaved Golden-variegated variety which is very striking.

VINCAS.—Besides the two named by Mr. Abbey, there is the Golden-leaved, which if well established and cut down early in the spring becomes very beautiful. I find the best way to propagate the Vincas and Brambles is to insert in the ground, in August and September, the ends of the young shoots, simply pressing them 2 inches into the earth.

There is also the fine showy Coltsfoot with a white-edged leaf; but unless grown in pots sunk in the ground it is troublesome.

The common Rib Grass would be excellent when variegated, and it is not rare to find it in the fields and by the sides of roads with both white and golden variegation; but my plants with all my care have returned in a year or two to their normal green. They also propagate badly.

Of Box some of the variegated kinds would be very useful, and nothing will bear clipping better.

VARIEGATED HOLLIES.—There are many very handsome varieties; and small plants, if nipped-in in summer and constantly taken up and transplanted, become very dwarf, and bear their pretty scarlet berries in abundance. A fine collection of these Hollies was exhibited at the Brussels Show and attracted great attention. Probably, if grafted or budded on a dwarf slow-growing kind, such as the Hedgehog, they would be much improved and produce berries earlier in the season.

I fancy the adornment of our grounds would be at least more interesting, if these handsome hardy plants received a share of that attention which is now almost exclusively bestowed on summer bedding-out plants.
—W. WOOLER.

DESTROYING ANTS.

The following is related by M. Garnier, in a communication to the Central Society of Agriculture, at Brussels:—A large colony of ants extending their walks over an area of nine or ten yards, gave great trouble in the garden. After

trying various ineffectual means of destroying them, I placed near their haunt several small saucers filled with sugar and water, in which was mixed one-tenth of the weight of white oxide of arsenic. I watched them for about an hour, during which time many came to drink, and went away staggering, taking with them one or two which were dead. In the course of two hours not an ant was to be seen, and the next morning the anthill was entirely deserted.

Why was this? The arsenic was not dissolved. Had they from instinct discovered that attempts were being made to destroy them? I am unable to say. I merely state the fact, and leave it to the investigation of others.—A. S. Druges.

A WATERING-BARROW.

In describing this barrow it is desired to bring into notice not only a very useful apparatus, but also one that every gardener may make for himself. There are plenty of excellent machines for watering gardens, but they cost money. In nine cases out of ten this one need not cost a penny.



The arrangement, as may be seen by the cut, is very simple. Having selected a good watertight barrel, put through it a strong wooden bar, with the ends rounded and projecting 2 or 3 inches from the sides. This bar should be about a foot from the top of the barrel. A hole is then bored in the bottom of the barrel, and a piece of leaden pipe, about 2½ feet long, inserted and secured. A valve with a leather hinge is placed over this hole. A string from the valve is passed over a pulley, near the top of the barrel. This being done, mount the barrel on such a barrow as is shown in the cut, put a rose upon the leaden pipe, fasten the valve-string to the right handle of the barrow, and the machine is made. If there are no unused barrow-wheels on the premises, one may be made by sawing two thick pieces of plank in a circular form, and nailing them together, with the grain of one at right angles with the grain of the other. Bore and chisel a square hole in the centre of this, and insert an axle, which is of easy construction.

The peculiar convenience of this watering-barrow is that it may be wheeled along a row of vegetables or flowers, and by pulling the valve-string with the fore-finger of the right hand, the water will flow from the rose until the barrel is empty, and the row will be watered with very little trouble and much expedition. If another pipe and rose be placed so as to project from the other side, both valves may be worked as easily as one, and two rows may be watered at the same time. The pipe being flexible, may be bent so as to suit the distance between the rows, the height of plants, &c. This apparatus is particularly adapted to places where there is much "row-watering" to be done.—(*American Gardener's Monthly*.)

THE ROYAL ASHLEAF POTATO.

ALTHOUGH we possess many really good sorts of this most useful of all vegetables, and consequently are rather fastidious in this respect, the appearance of the above new kind excited a good deal of interest, and I was one of those who eagerly procured a certain number of "sets" for early planting.

This was done on the 10th of April, in well-prepared ground, which had previously been manured with well-

decayed stable-dung, mixed with rotten Oak leaves. On the same day I planted an equal number of the following kinds, the tubers being as far as possible of the same size—viz., the old Ashleaf, Gloucestershire Kidney, and Myatt's Early Prolific.

The first two proved the earliest, their tubers being fit for use on the 25th of June, when the haulm of Myatt's likewise commenced to dry; whilst the Royal Ashleaf still continued growing. So far as to earliness.

As regards the produce, the old Ashleaf, as usual, yielded only a scanty crop; the Gloucestershire Kidney about twenty-five per cent. more, and the tubers more regular in size and shape. Yesterday (July 30th) I had the whole bulk of the four sorts taken up, and found Myatt's Prolific by far the most productive; whilst the Royal Ashleaf, upon the whole, proved not more prolific than Gloucestershire Kidney, and in flavour equal, though not better than Myatt's.

The Royal Ashleaf seems to have one great drawback, some of the plants being quite dead, whilst others in the same row had the haulm quite green. I am satisfied that I possess the true sort, having obtained my seed from one of the most respectable London firms.

Of other new Potatoes which I tried, Daintree's Seedling (now ripe) is a very prolific, good-sized, round Potato, with a very rough skin, white flesh, quite mealy, and delicious. Epp's Glory is still growing vigorously, in spite of the prevailing drought, and apparently a latish sort.

I shall repeat the experiment with the four above-mentioned Kidneys next year, and plant a certain number of tubers of equal weight, so as to be able to judge which of them yields the greatest proportion in weight.

I must add that the spring frosts in this part of France were not of sufficient consequence to have the least influence upon the growth of Potatoes.—FERDINAND GLODRE, *Les Sablons (Seine et Marne)*.

PORTRAITS OF PLANTS, FLOWERS, AND FRUITS.

CORYLOPSIS SPICATA (Spiked Corylopsis). *Nat. ord.*, Hamamelidaceæ. *Linn.*, Pentandria Digynia.—A Japan shrub, introduced from Yokahama by Messrs. Veitch, of the Royal Exotic Nursery, Chelsea. Flowers yellow, fragrant like the Cowslip. Blooms in February. "Shrub deciduous, and the flowers appear before the leaves, which are so much like those of our nut bushes as to suggest the name of the genus."—(*Bot. Mag.*, t. 5458.)

DENDROBIUM EBURNEUM (Ivory-flowered Dendrobium). *Nat. ord.*, Orchidaceæ. *Linn.*, Gynandria Monandria.—Sent to Messrs. Hugh Low & Co., Clapton Nursery, from Moulmein. Flowers "have exactly the appearance of polished ivory," having dark red lines on the lip and base of column.—(*Ibid.*, t. 5459.)

KALANCHOE GRANDIFLORA (Large-flowered Kalanchoe). *Nat. ord.*, Crassulaceæ. *Linn.*, Octandria Monogynia.—Native of Mysore, Hindostan. Flowers yellow. Bloomed in a greenhouse devoted to succulents during May.—(*Ibid.*, t. 5460.)

DELPHINIUM BRUNONIANUM (Mr. Brown's Musk Larkspur). *Nat. ord.*, Ranunculaceæ. *Linn.*, Polyandria Monogynia.—"This handsome species is a native of Western Tibet, on the mountains at altitudes of from 14,000 to 18,000 feet, where it flowers in August and September." In England it blossoms in the open border in June, and dies down early in July. The flowers are pale blue, streaked with purple, and black in the centre. The whole herb has a strong musky scent.—(*Ibid.*, t. 5461.)

CÆLOGYNE ODORATISSIMA (Highest-scented Cælogyne). *Nat. ord.*, Orchidaceæ. *Linn.*, Gynandria Monandria.—Native of Neura Ellia mountain in Ceylon, and the Neilgherry Hills of Madras. Grows on trees. Flowers in this country have a honey-like smell; they are white, appearing in April. It would seem to prefer shade, as in its native places it is always found on the north side of the hills.—(*Ibid.*, t. 5462.)

APHELANDRA LIBONIANA (Libon's Aphelandra). *Nat. ord.*, Acanthaceæ. *Linn.*, Didynamia Gymnospermia. Probably a Brazilian plant. Bracts bright orange; flowers yellow tipped with red. Flowers during May in a warm stove.—(*Ibid.*, t. 5463.)

FANCY PELARGONIUMS.—*Ann Page*, very round outline; bright crimson-rose top petals; lower ones lighter, all white-edged. *Edgar Turner*, dark crimson upper petals, with a brighter crimson edge; lower petals same colour, but shaded off paler, until in the throat quite white. Both raised by Mr. Turner, Nursery, Slough.—(*Floral Mag.*, pl. 265.)

RHODODENDRON.—*Princess Alice*. Raised by Messrs. Veitch by crossing *R. Edgeworthii* with *R. ciliatum*. Flowers large and pure white.—(*Ibid.*, pl. 206.)

LIARIS.—*Mademoiselle Pailh*. Raised by Mr. Sauter, Versailles Nursery. Upper petals orange; lower petals claret, darkly veined: bases of petals yellow veined with claret.—(*Ibid.*, pl. 207.)

SARRACENIA DRUMMONDII.—Pitchers green; tops white veined with green.—(*Ibid.*, pl. 208.)

ROSE.—*Lord Macaulay*. "Full, deep, and richly coloured, it takes an honourable place among the thoroughly good crimson Roses which have been rather bountifully added to our collections during the last two or three years. We owe the opportunity of figuring it to Mr. W. Paul, of Waltham Cross, by whom it was obtained from the continent, and who first introduced it to the notice of British rosarians in the spring of last year; the flowers then exhibited winning, most deservedly, a first-class certificate.

"When recently lecturing on Roses at South Kensington, our friend and correspondent, Mr. Radclyffe, observed with much truth, that none but vigorous-growing Roses were suitable for our English climate—this vigorous character being, however, just what it too often happens that Roses of continental origin are deficient in. In this respect we are glad to be able to attest that Lord Macaulay will fully meet the requirements of English growers; the habit being strong, the foliage bold and ample, the flowers of full average size, the form cupped, the petals firm and smooth, and the colour a rich crimson. As regards colour, indeed, the flowers are variable. Sometimes they are richly shaded with very deep, almost maroon crimson, and sometimes they are of an almost uniform deep crimson, as our figure represents them; and sometimes, as was the case with the blooms shown on the occasion of Mr. Radclyffe's lecture, the margins of the petals are of a glowing crimson scarlet. In any of these conditions it is a beautiful Rose of high merit. We have, therefore, no hesitation in recommending it heartily to the notice of Rose-growers as a flower of quality and refinement, combining with the richest colouring a perfectly free and vigorous habit of growth."—(*Florist and Pomologist*, iii., 169).

THE EDUCATION OF THE EYE.

A WELL-EDUCATED eye is always an advantage to its possessor, but few professions afford greater scope for its acquirement and exercise than that of a gardener. Most gardening operations require a clear discriminating eye, and a steady hand. Wherever you find an amateur whose productions and general management are equal to those of many practical gardeners, you at once set him down as one who is "quick to learn and wise to know," for his skill and taste are the result of his own observations and experiments. Although a liking for a pursuit generally leads to some degree of skill in it, yet there are men who do one or two things well, and the rest of their work very indifferently. Take, for instance, your amateur friend who makes Dahlias, Pansies, Marigolds, or any particular flower his chosen hobby. He shows you some very fine flowers on robust plants; but then you must shut your eyes to the rest of his garden, or else your admiration of his flowers will be extinguished by your dislike of disorder and weeds—that is to say, if you have an educated eye. Some people say this class of men are incapable of more than one idea—it is Pinks and nothing but Pinks with them (or some other flower, as the case may be); and although their Pinks may be good, their gardens are far enough from being the pink of perfection. Is it not strange that the eye that can admire the symmetry and charming combination of colour which distinguish florists' flowers, should sometimes be wholly insensible to the enhancing beauty of cleanliness, neatness, and order in garden management? Yet so it is, and there is no accounting for it, otherwise than by the want of what may be termed eye education. You will often enough see

men put away their spades, trowels, or other tools without cleaning the dirt off them. Now, not to speak of the pleasure there is in using a bright implement, and the finer work you can make with it, some people would clean it and make it bright after use simply for the pleasure of seeing it so. This sort of thing is illustrated by the saying that one sometimes hears regarding the mistress of a house, "She has a keen eye for dirt." When you see a plot of Dahlias so well staked and tied that every shoot is brought into the best position for receiving light and air, and the straggling or useless branches carefully pruned away, you are the more surprised if you find the border flowers that grow along by the walk all hanging in tangled masses, entirely at the mercy of the wind and rain. In a case like this you say, "Well, this man may be a good Dahlia grower, but he has no eye for anything else in his garden;" and you are not far wrong. It is not unlike what housewives call a "clean middle and dirty corners," when they want to point out a sister's deficiency in the domestic virtue of cleanliness. These are results of defective eye education that no Diogenes would require a lantern to discover. They are open, glaring, obvious, and wherever they exist they are as ugly as they are apparent. Again: when an amateur takes you to see his favourite plot of flowers, and you have to pass along a road that is barely passable, you naturally suppose that gravel and engine-ashes must be at a high premium in that quarter, and entirely beyond your friend's reach. But, on the other hand, it must be conceded that where these garden defects are to be found, they are not always to be taken as indications of defective eye education, or want of taste. Amateurs are often hard pressed to get their favourite flowers attended to, and however much they may desire to have everything trim and shipshape, the time they are enabled to bestow on their gardens is wholly inadequate. You can generally see, however, whether a man is of a tasty turn by the way in which he does what his time permits him to do, and eyesores will, under every circumstance, remain eyesores to the educated eye. The very fact of there being such a word as "eyesores" proves that some eyes are more defective than others.

Most men have heard or used the expression, "He has not a straight eye in his head," at some time or other; and this very common, but not very complimentary phrase, indicates either the careless use or the imperfect training of the eye. One ploughman makes straight furrows, and another makes crooked ones; one man makes even work with his spade, while another leaves the ground in hills and holes; one gardener can clip a Box-edging as straight and clean as if he had chalked a line to go by, as a tailor has when he cuts out a coat, but his neighbour performs the same operation in an out-and-in style, which is less pleasing to the eye. This may not be so much a defect in the education of the eye, as in the hand and eye not working together, or the hand not being trained to obey the eye. He may perceive that his work is not well done, and be dissatisfied with it. But when a gardener can go complacently past the yellow and decayed leaves on his greenhouse plants, when he has time to remove them, you may be sure his eye education is defective. So in bedding-out for summer decoration, you will find one gardener make far nicer work than another, not in arranging colours and sizes for back or front positions, for that is often done according to a fixed plan, but in the regularity with which he places each plant at the proper distance from its neighbour when he has only his eye to guide him. The same thing may be observed in a hundred different forms. One eye cannot bear to see a crop of weeds and moss growing along with plants in pots, nor slimy vegetation covering the sides of the pots, nor gaining a foothold on the flags of a greenhouse, while to another these things are no eyesores at all. So with the plants in a greenhouse or stove; a gardener with what is called a good eye will make a far more effective arrangement than one who has neglected his eye education. It is the same in potting: one man will detect a wireworm, or anything else of an injurious character, and cast it out, while another will shovel everything into the pots, perfectly unconscious that he is doing his best to spoil his own work.

Budding and grafting require an educated eye, for on the skill and nicety with which these operations are performed depends, in a great measure, their success. But for all that,

you will find some who do not see that a clean cut and a nice adjustment of the bark of the stock and scion are essential in grafting, nor that in budding it is at all important not to break the inner rind, nor to pull the eye out of the bud in taking away the wood. Such practitioners wonder that they have so many misses; but the wonder should be the other way, for their hits belong to the chapter of accidents. On the whole, then, it is beyond doubt that some eyes afford evidence of a higher education than others. It is perhaps equally certain that some eyes are naturally endowed with keener and finer powers of perception than others. But it may be safely asserted that careful training will render the eyes of all equal to the work they have to perform, and capable of complying with the demands of good taste. A great point is gained when a man can see that his eye needs anything in the way of education. This is the first step on the road to a clear, discriminating, and tasteful vision. It is sometimes said of a person that "He has an eye like a hawk, and that nothing escapes his notice," but this power can seldom be attained without a close and lengthened practice of observing minute details. Careful inspection of the forms of flowers and parts of flowers, as well as of the leaves and seeds of plants, such as the study of botany involves, is excellent training for the eye. From small things it gradually begins to appreciate and love the harmony of Nature on a larger scale, and the result is a quick discernment of beauty and deformity, or what we may call the fitness of things. Thus by practice and painstaking, the eye acquires a natural but not conventional liking for nicety and order, and that valuable faculty of arranging, combining, and suggesting, on which the occupation of a gardener or florist makes incessant demands.—AN OLD SPADE. (*West of Scotland Hort. Mag.*).

WORK FOR THE WEEK.

KITCHEN GARDEN.

To those who would insure a constant succession of choice kinds of vegetables and salads, the next fortnight will be the most important of the whole year. Should the present dry weather continue, the water-barrel will be in constant requisition morning and evening. Surface-stirring must also be frequently resorted to for the purpose of preventing too rapid evaporation. Carrots, now is a good time to sow the Early Horn to stand through the winter. *Endive*, planting must now be proceeded with in earnest, for what is now planted will constitute the great bulk of the autumn and midwinter salads. Let elevated beds of 4 feet in width, and possessing a bold curvature, be provided in an open and dry situation. Such beds should be a foot or more above the ground level, and must be made very rich. These beds may be hooped over in the end of October, to be readily covered with mats when frost arrives. *Lettuce*, keep up successive sowings of this and of *Radishes*, the growing crops of which must be liberally supplied with water. *Onions*, sow a good breadth of winter *Onions*; the *Strasbourg* and *Tripoli* are good sorts. Sow thickly for drawing young for salads and for transplanting. Let the ripening *Onions* be bent down by hand in order to get the ground clear for *Winter Greens*. *Parsley*, sow for winter and spring use. *Spinach*, about the middle of the week is the proper time to sow *Prickly Spinach* for the winter. The ground should be good, but not too richly manured, as it is apt to make the plants grow too strong, which renders them more liable to injury from frost. Whatever remains undone in the way of planting-out *Broccoli* and *Winter Greens* must be completed without delay. Pay due attention to the thinning-out and surface-stirring amongst all advancing crops. Gather and store seeds of such choice vegetables as it may be considered advisable to preserve; but anything very extensive in this way ought never to be attempted in gardens exclusively devoted to the purpose of cultivating vegetables for families having any pretensions to taste, as in most cases disappointment and inferior quality will be the result. Whoever is conversant with the nature of kitchen-garden produce is well aware how much the qualities of vegetables become deteriorated when grown, seeded, and produced on the same ground year after year.

FRUIT GARDEN.

The preservation of wall fruit from birds and insects should

occupy attention. Haythorn's hexagon or any other small-meshed netting may be employed with advantage to protect Green Gage or other Plums. Look carefully over Peach and Nectarine trees, and remove nails which are too close to the swelling fruit. In stopping and arranging the wood let only as much as can conveniently be laid in be allowed to remain, and that convenience must be qualified by due consideration for the perfection of the fruit and the proper ripening of the wood, which only the influence of the sun and air can accomplish. It is also an error in another respect to retain a large amount of wood to be removed at the winter pruning, for an undue excitement and extension is given to the roots, which, with a superabundant supply of sap, induces in the spring the growth of rank and unmanageable wood. Pear shoots which have been left, or only partly shortened, should now be pruned back to three or four eyes. Proceed with Strawberry planting. Remove runners from established plants to relieve and strengthen them.

FLOWER GARDEN.

Much watering will be necessary here during the great heat we now experience. Advantage must be taken of the first shower of rain to put out young seedling Wallflowers, Brompton Stocks, Sweet Williams, and other biennials into nursery-beds. Hollyhocks are general favourites, but they do not afford cuttings freely, and are in general not over-plentiful about most places: these should, therefore, be examined often in search of cuttings which they may afford, as those rooted about this time will make strong plants for next season. Attend to the tying-up of these and Dahlias, and frequently go over the masses of *Verbenas*, &c., for the purpose of regulating the growth, so as to keep it orderly and neat. The present dry weather has been rather prejudicial to *Polyanthuses*. After rain put out seedlings; a north-east border will be most suitable, the soil of which should be composed of loam, decayed leaves, and cowdung reduced to a black unctuous mass, in about equal proportions. We would again urge the necessity of layering *Carnations* and *Picotees* without loss of time. Attend to the gathering and saving of choice perennial and biennial flower seeds; these should be watched daily, and collected as they ripen. We do not urge this operation to be carried on to a great extent, as the returns would not be adequate to the expense and trouble of collecting and cleaning them. We merely allude to those showy species and varieties, some of which every flower gardener possesses and cultivates, and which it is desirable to preserve.

GREENHOUSE AND CONSERVATORY.

It will be much to the advantage of the inmates of plant-houses to reduce the shading after this time to enable the plants to ripen their summer's growth, allowing more air to keep down the temperature and to check any tendency to a second growth which may show itself, and which can only take place at the expense of next season's bloom. Remove *Achimenes*, *Gloxinias*, *Tuberoses*, and plants of the same habit from the conservatory when on the decline. *Passifloras* and, in fact, the greater part of conservatory climbers will be growing fast and will require frequent training. *Epacrises*, winter-flowering *Heaths*, and other things requiring to have their wood ripened early, may now be placed in a sunny exposure. As the wood is already formed nothing remains but to get it ripened; and although sufficient water must be given to supply the demands of the plants, a dry and warm atmosphere are essential to the perfect ripening of the wood and consequent formation of bloom-buds. The different varieties of *Epiphyllum*, if their growth is sufficiently advanced, should have similar treatment. Give a shift to *Chinese Primroses* and *Cinerarias*. *Chrysanthemums*, *Salvias* and other autumn-blooming plants should be placed in their blooming-pots.

STOVE.

Various stove climbers as *Combretums*, *Quisqualis*, *Alamandas*, &c., will bloom for a considerable time if the shoots on which the flowers are borne are slightly cut-in when the blooms decay, and anything which prolongs the period of beauty with those favourites is worthy of adoption.

PITS AND FRAMES.

Where bedding-out on a large scale is practised, the propagation and preservation of the annual supply of plants becomes an important part of the gardener's duty. That

the result may answer the expectation at bedding-out time, a careful calculation of the number required and the means there is of preserving them through the winter should be made. The next thing to consider is the kinds which require immediate attention to get them established before winter, those which may be deferred a month or so longer, and, again, what can be propagated in sufficient numbers in the spring, provided a few store-pots of each are kept for the purpose. In the first class we may place nearly all the varieties of Fancy and bedding Geraniums, Crassulas, Lantanas, Mesembryanthemums, Hydrangeas, and plants of similar habit which require to be established before winter.

W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

Owing to the parching drought the work here has been of a routine character, as it was hopeless to think of planting anything out, the ground being like dry ashes, and there being no water to give to anything planted out. It surprises us that things continue to grow as they do, and they never could have done so but for the deep stirring of the ground in the first place, and frequent surface-stirring in the hottest days. Cauliflowers, in addition, have had fully 6 inches of short litter thrown closely between the rows, and firmed up to the stems, and they are looking as well with this mulching as if they had been watered twice a-week.

We have now taken up all the Potatoes, a fine crop, and, as yet, not a speck of the old disease. We have put them in small heaps, with dry earth and ashes sprinkled among them. Two years ago, though the Potatoes showed no signs of disease when taken up in dry weather, like the present, they began to get diseased a month after they were housed in equally good condition, and when placed together in such small quantities that anything like heating was out of the question. Then, in addition to dry soil, a little powdered lime was also scattered amongst them. After all that has been said of this disease, we seem to know little more about it, as to its cause and cure, than we did on its first appearance amongst us. Amongst things to which we ventured to give a little water was Celery, as otherwise we were afraid it might throw up its flower-stalks. Immediately on giving it the sewage water, we covered the ground between the plants with 2 or 3 inches of half-rotten tree leaves. If that is not enough, we must use litter. Water is now with us becoming almost as valuable as wine—a fact which we hope will be borne in mind by those friends who have written respecting changing the position of their garden, and especially from the neighbourhood of a never-failing pond to a site where there is at present no water. Philosophise as you will, you cannot but feel annoyed when, after having got all things in tolerable order, you find them decaying and dying before your eyes, and you cannot give even a drop of water to save them.

Something also akin to envy will be apt to creep over you when you hear of other people being so well situated in this respect. One of our friends has the charge of a pretty flower garden in front of the mansion, on ground about as much elevated as ours, and he used to know what it was to be without water in summer. A stream goes through the valley, however, forming a large lake, and a water-ram constantly going now supplies a large elevated cistern, and the turning of a tap and a long piece of hose enable a man easily to flood all the beds, and grass too, in a short time. We have heard this morning from the able superintendent of the Liverpool Botanic Gardens, and whilst we are parched up he tells us that some things are suffering from too much rain. Last season the flower-beds there were magnificent; but though we took notes of them in a deluge of rain, we have not yet been able to tell what we saw. We have heard that the flowers are even, if possible, more attractive this season. On our visit last year we had some experience of the delugings to which our friends in the west are subjected; and Mr. Tyerman would do good service by giving a list of the plants that do best under such circumstances, as even here we find that there are plants that seem never to have too much wet, whilst there are others that do little good unless they have a clear rather dry atmosphere.

FRUIT GARDEN.

Much the same as in the previous week. Have been obliged to throw some whitening water over the glass to lessen the evaporation of moisture within, and find that with all this prevention late Grapes and fruit in the orchard-house will be apt to colour and ripen too soon, owing to a deficiency of moisture at the roots. We have managed to give them a little sewage water, but not a fifth part of what we would have liked to have given them. Figs, whose first crop is now nearly over, we have also watered well, and then covered the soil with tree leaves, and kept the house closer to bring on the succession crop. Some plants in pots in the orchard-house will keep up the succession. All the pots in the orchard-house, and part of the soil, have also been mulched with half-rotten leaves, in order to lessen the necessity for watering often. The most of the pots are so heavily laden that some visitors have twitted us about not taking part in the orchard-house controversy, but we have already more irons in the fire than we can attend to properly. With such demands for moisture, and reservoirs empty, it need excite no surprise that the sky and the barometer are the last things to be looked at at night and the first in the morning.

Where Melons have been lately planted out, we manage to give them a slight syringing in the afternoon. For plants ripening their fruit we stir the surface of the soil to prevent cracking and over-drying, and give a little water to the roots beneath, by pouring the water down pipes left on purpose. The drier the atmosphere, not to be parching, the better will the flavour be. We have been desired to answer here some inquiries as to the best soil for Melons. One friend says that he can obtain no earth except that from his garden, which is a loam rather stiff than otherwise, and that he is nonplussed with long details of separate component materials for forming a suitable compost. No wonder. For ourselves we prefer simplicity, and we could not have a more suitable compost for Melons than such a garden soil if we searched the country through. To have it fresh, however, we would prefer the under spit to the top spit; and if the plants were a good size when turned out—say in six-inch pots, we would use no other soil whatever, but merely place some of the finest and best aired round the roots, and squeeze all the rest tightly with hands and feet, as under such circumstances it will be pretty moist. If the plants are smaller, then from the surface of such soil ridged up in winter we would collect a few barrowloads in the spring, and keep it for placing a few shovelfuls round each plant. In each case after the firming, the surface may be left a little open and loose, to prevent cracking, and the too rapid evaporation of moisture. Such soil will in general be better without any manure at all. If the Melons are not strong enough, manure waterings can be added at pleasure. But in such bottom-spit garden soil this will be rarely required.

Another friend has a light sandy soil. The best thing he can do is to have a little clay, or strong loam to mix with it. Without anything of the kind, however, his light soil will do very well with a little rotten dung added to it if poor, and if made rather moist before using, a depth of at least 18 inches given, and the soil well firmed by mallet, and hands, and feet, as it is put in. So firmed, with a sprinkling of leaf mould on the surface to prevent drying, we have grown fine Melons in very light soil. The firming the soil is in such matters half the battle, and is of far more importance than a dozen of varied materials nicely mixed together.

ORNAMENTAL DEPARTMENT.

General routine as to stove and greenhouse plants, removing Balsams, &c., from conservatory, and supplying with Coleus, Begonias, Browallia, Thunbergia, &c. Putting more whitening on roofs to shade, and thus lessen watering, as by this means we could also lessen the amount of air, and thus prevent so quick drying up. Syringed floors and stages with the same object in view. These matters, of course, would be of less importance where water is plentiful, but, where at all scarce, a nice moist growing atmosphere can thus be kept up at the smallest amount from the water-pail. The same practice will also be valuable for lessening labour, and generally that is not too plentiful.

Some gentlemen and ladies are most honourably straightforward in this respect. They know their own circumstances

best, and may well consult their own tastes as to how they will spend their income. When the gardener is anxious to have some addition or some improvement made, they may tell him that they have no objection whatever, provided no additional expense is incurred and no additional labour in keeping up is required; as on these matters their mind is quite made up. If we gardeners get into a fix after this as respects labour we have only ourselves to blame. One thing many of us forget, which is simply this, that a small place well kept is far more satisfactory to all parties than a large place, the work of which can never be mastered from January to December. The best thing in such circumstances is to keep the principal parts well and let the rest go wild. When some people go to a large well-kept garden and begin depreciating their own little place, and say they will lose all zest and interest in it, it would make us very sorry but for the conviction that the illusion would only be of very temporary continuance. Small gardens ought to be the best managed. If a brother workman has a single flower-bed more beautiful than the Duke of Sutherland possesses at Trentham, he may well divide the honours even with a Henderson. We candidly own, that in small places we have seen single beds of flowers, that out of our many beds we should have found it difficult or impossible to find a bed equally good in all its properties. Extent is apt to bewilder, but for comparison we should come back to quality. Hence the florists with their few yards of ground may well claim more than equality with the largest gardens. The cultivation of the sense of the beautiful wherever found, is the best antidote for even the rootlets of everything like envy or covetousness.

In the flower garden the sun has pretty well done all the mowing and machining for us, but the grass is now becoming green. As yet the flower-beds have kept going on pretty well, independently of the drought. What have chiefly suffered are the *Calceolarias* and *Salvias*. We have never had the former better. As yet we have saved them chiefly by mulching, and a few homoeopathic doses of liquid. Without water we fear another week will finish them. In our ground they would not disagree with a nice shower three or four times a-week. A wet season, therefore, suits them better than a dry one. Scarlet Geraniums on the other hand, that have scarcely had any water after they were established after planting out, seem just to be in their element. Their foliage covers the ground, and the bright sun and dry atmosphere just suit the large corymbs of bloom.

This may, therefore, be an appropriate place to say a few words in answer to some inquiries respecting *planting out Scarlet Geraniums* at once, or plunging them in the pots in which they grow. The proper course to pursue will depend almost entirely on the natural or the artificial supply of moisture. We have previously mentioned four large Geranium plants that have been in the same pots many years, and which have the pots plunged in the flower garden. In wet summers these plants were always great balls of scarlet, because the roots were confined and comparatively dry, whilst beds of Scarlet Geraniums planted out were only middling as respects blooming, the foliage being abundant and requiring much thinning. These four plants are also good this season, but at the expense of watering them twice a-week, whilst, as stated above, those planted out have had none, and are pretty well as much supplied with bloom in proportion to their size. We could manage to water these few plants, but for hundreds and thousands, we must have let them take their chance; and if these had been in pots we know they would have been scarecrows by this time without watering, whilst planted out they are very fair indeed without any watering.

The inferences we draw from these facts, then, are—that in dripping, rainy districts, as about Liverpool and Glasgow, or where water can be given in abundance where required, Scarlet Geraniums will bloom best if turned out with their five or six-inch pots plunged in the ground, as the confinement and comparative dryness of the roots will encourage bloom, and discourage excess of foliage. But, on the other hand, in districts where there is generally little rainfall in summer, and in places, especially, where watering cannot be resorted to, it will be found best to turn the plants out in the usual way, without their pots. In some wet summers and

autumns some beds in which Scarlets were plunged with their pots were magnificent here, whilst others planted out were rather too much disposed to give foliage instead of extra bloom. Both in the last and present summer the beds of plants turned out in the usual way have done very fairly, and give healthy foliage and fine trusses without a drop of water. The four fine plants that have been, we think, seventeen years in the same pots, and are plunged in the centre of beds in their pots, and which show after three days at most that they need another drink, just tell us that our beds of Geraniums had been in a woful plight if they had consisted of plants turned out with their pots plunged, and we could have given them no water. With a little water we have been able to keep *Calceolarias* alive as yet. With no more at our command, and Geraniums plunged in pots also needing help, it is most likely that both would have perished.

The character of the district, then, as to rains, and the supply of water when needed, are the best test to regulate our practice. So apt are Geraniums to become over-luxuriant in wet summers, that we would be much disposed to plant out and plunge them in pots, could we give water when the season proves a dry one. In such a season as this in Hertfordshire, most likely the most of such plants would have dried up and died before now, if there were nothing better than rain water to depend upon. Circumstances, therefore, become the best regulators of our practice, and what would be the best practice at Liverpool might not be the most suitable one here, and still less so along the dry east coast. In catering for the interests of all cultivators, the practice and the testimony of practical men in different localities will ever be most valuable.—R. F.

COVENT GARDEN MARKET.—AUGUST 6.

The long continuance of dry weather has affected the supply less than might have been expected; still it must be remembered that the demand is less, owing to families going out of town. Hothouse Grapes and Pines are sufficient for the demand; Peaches, Nectarines, Gooseberries, and Currants, plentiful; Strawberries and Raspberries scarce; Apples and Pears are coping in quantity. Imports from abroad consist of Pines, Apricots, Pears, and heavy consignments of Plums. Cabbages and Cauliflowers have advanced in price.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples..... $\frac{1}{2}$ sieve	1	0	1	6	Mulberries.....quart	0	0	0	0
Apricots.....doz.	1	0	3	0	Nectarines.....doz.	8	0	15	0
Cherries.....lb.	0	6	1	6	Oranges.....doz.	100	12	0	30
Currants, Red..... $\frac{1}{2}$ sieve	2	0	4	0	Peaches.....doz.	10	0	30	0
Black.....do.	4	0	5	0	Pears (kitchen).....bush.	0	0	0	0
Figs.....doz.	2	0	3	0	dessert.....doz.	2	0	3	0
Filberts & Nuts per lb.	0	9	0	0	Pine Apples.....lb.	3	0	5	0
Gooseberries..... $\frac{1}{2}$ sieve	1	0	3	0	Plums..... $\frac{1}{2}$ sieve	2	0	4	0
Grapes, Hamburgs lb.	2	0	5	0	Quinces.....do.	0	0	0	0
Muscats.....do.	4	0	8	0	Raspberries.....lb.	0	6	1	9
Lemons.....100	4	0	10	0	Strawberries.....punnet	0	6	1	6
Melons.....each	2	6	5	0	Walnuts.....bush.	14	9	30	0

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes.....each	0	4	0	6	Leeks.....bunch	0	4	0	6
Asparagus.....bundle	0	0	0	0	Lettuces.....score	0	9	1	6
Beans Broad..... $\frac{1}{2}$ sieve	1	6	0	0	Mushrooms.....pottle	1	0	2	0
Kidney..... $\frac{1}{2}$ sieve	2	0	2	0	Mustd. & Cress, punnet	0	2	0	4
Beet, Red.....doz.	1	0	3	0	Onions.....bunch	0	4	0	6
Broccoli.....bundle	0	0	0	0	pickling.....quart	0	6	0	8
Brussels Sprouts..... $\frac{1}{2}$ sieve	0	0	0	0	Parsley..... $\frac{1}{2}$ sieve	1	0	1	6
Cabbage.....doz.	0	9	1	6	Parsnips.....doz.	0	9	1	6
Capiscums.....100	0	0	0	0	Peas.....quart	0	6	1	0
Carrots.....bunch	0	5	0	8	".....bushel	8	0	5	0
Cauliflower.....doz.	3	0	6	0	Potatoes.....each	8	0	12	0
Celery.....bundle	1	0	2	0	New.....bushel	3	0	4	6
Cucumbers.....each	6	6	1	0	Radishes doz. bunches	0	0	0	0
pickling.....doz.	0	0	0	0	Rhubarb.....bundle	0	0	0	0
Endive.....score	1	3	2	6	Savoy.....doz.	0	0	0	0
Fennel.....bunch	0	3	0	0	Sea-kale.....basket	0	0	0	0
Garlic and Shallots, lb.	0	8	6	0	Spinach.....sieve	2	0	4	0
Gourds & Pumpks. each	0	0	0	0	Tomatoes.....doz.	1	0	3	6
Herbs.....bunch	0	3	0	0	Turnips.....bunch	0	4	0	6
Horseradish.....bundle	1	6	4	0	Vegetable Marrows doz.	1	0	2	0

TO CORRESPONDENTS.

* * We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

STRAWBERRIES (J. B. F. N.).—You can obtain the information you seek for from Mr. Rivers, Nurseries, Sawbridgeworth, Herts.

BOWERS (A Glasgow Subscriber).—We do not know the party you mention.

BOOKS (T. P.).—The "Cottage Gardeners' Dictionary" is just the thing for you.

PEAS FOR SEED (A. E.).—Peas for seed should be sown rather thinly in rows about the middle of March, allowing the same distance between the rows as the kinds respectively attain in height. The treatment given to Pea crops generally applies to those for seed—that is, earthing-up, staking, and hoeing between the rows. When the pods towards the extremity of the haulm become white the crop should be pulled up, and laid on the sticks for a few days to dry. They are, after drying, placed on a dry hard floor and beaten out with a flail. The Peas are then sifted to free them of dust and the seeds of weeds, and stored away in bags, or on a dry floor.

LAPAGERIA ROSA (E. P.).—You need not fear about the air, only give abundance of water at the root. You cannot give it too much air, if only the current is not strong, and that it cannot be with the netting to keep out heat. We think all will be right.

VALLOTA PURPUREA—CEREUS HEKAGONUS (C. E. Major).—You may separate the roots immediately after the blooming, or, perhaps better, in April. In future avoid deep planting. It is very detrimental to this beautiful Lily, and yours rising above the soil is a proof of what it likes. The *Cereus* may have its top cut off now. This should be done with a sharp knife transversely at the required height. The part intended to strike should be exposed for a few days until the wound is dry and covered with a kind of skin. It will then strike or root freely in any light peat sandy soil. This is a bad time for grafting the stock. Such operations are best performed when the stock commences growing.

THRIPS ON FRANCISCA (Z. Z.).—The black insects on your leaves are thrips. Make a solution of 4 ozs. of soft soap to a gallon of soft water at 120°, and dip the plant in it for about one minute, allow the plant to dry then repeat the operation, and wash afterwards with clear water, or sponge, every leaf on both sides with the above solution. Fumigating with tobacco will also destroy thrips.

NEW VINERY (H. R. D. P.).—We presume you can go no higher than 7 feet at back. Then for Grapes in June we would have no more than a height of 2½ feet in front. If the ten-foot width inside is on the same level, or a little higher than the outside, you could plant inside, and have the front wall on arches; or you could make your front boundary of posts and boards, and have ventilators in the boards. If you make the bones inside to give you more head room, unless you kept the roots there, or had extra drainage, you would need to plant the Vines outside and take the stems into the house. This plan would give you more room inside. Without this sinking, you might have more head room by taking a short hip, say 2½ feet from the top of the north wall to a ridge-board, say 8½ feet from the floor level. You might have four or five openings on pivot hinges in this hipped roof, and, with ventilators in front, all your roof could be fixed, and glazed with large squares. It would also be as well to have a corner-piece of 18 inches at each end next the apex made to open. The fine ought to be 1 foot in width, and from 15 to 18 inches deep outside measure. We shall be glad to assist if we can.

CAMPYLOBOTRYS REGALIS CULTURE—MIMULUS (Rossetti).—The *Campylobotrys* is rather difficult to keep in good condition. It delights in a moist calm atmosphere. It is extremely susceptible of injury from water standing on the leaves, sudden changes of temperature, and currents of cold air. By keeping your plant in a close humid part of the stove, in a diffused or not strong light, yet near the glass, and preventing cold, damp, and stagnant air lodging near it, with good drainage and sweet soil, we think the leaves would retain their beauty much longer. Cuttings of *Mimulus* struck now will make nice plants for blooming in the greenhouse next spring; but after blooming once in the greenhouse they are not suitable for planting out in beds. *Mimulus* for beds should be planted in them in the spring, and they make a fine show for a time, but are very poor after a month or two of bright weather. They like a slightly shady situation and moist soil.

ORNAMENTAL GRASSES (B. B.).—Some hints on this subject will appear shortly.

LAYING OUT A PLEASURE GROUND (An Irish Subscriber).—We quite approve of your planting *Rhododendrons* against the wall of the proposed pleasure ground. At Raith, near Kilskealy, in Scotland, a wall is thus covered with the common *Rhododendron* right to its top, and the border in front with the very best kinds, as reared and grafted by the late Mr. Crockett. It gave a noble background to the flower garden. When this border is decided on you will still have 89 by so much less than 106 feet for beds on lawns. We would rather you would devise a plan for yourself, or send one for us to amend or criticize, which we would gladly do, as well as the style of planting; but were we to furnish plans for every similar place where such plans are required, we could do nothing else. We will criticize any plan, but we cannot do more. The slope of the ground will be an advantage when the beds are looked at from either side. Something of the simple plan given at p. 113 of last volume might suit. Unless the plan is artistic, like that at Trentham, or Licham, the simpler it is the easier will it be to plant and manage.

ROSES (A Six-years Subscriber).—Hybrid Perpetuals—Madame Furtado, Senateur Valise, John Hopper, Pauline Lanxereux, Baronne Prevost, Général Jacqueminot, Géant des Batailles, Lord Raglan, Louise Odier, Jules Margottin, Comte de Nantail, and Caroline de Bussal. Hybrid Chinas—Charles Lawson, Chénédol. Hybrid Bourbon—Coupe d'Habé, Souvenir de la Malmaison. Tea—Gloire de Dijon, Adam. Noisettes—Lamarque, Triomphe de Rennes.

MILDEWED HAMPSHIRE GRAPES (A Constant Reader, Hemmingsmith).—The berries had been so rubbed by shaking in the course of carriage that we are not certain whether they were mildewed. We incline, however, to think that they were; and if these Grapes were under our care we should fill a soup-plate with flowers of sulphur, roll each bunch in the sulphur, and rub each sulphured berry between the finger and thumb, leave the sulphur on for a week, and then syringe it off. We have seen Grapes thus cured that were severely mildewed.

MEXONS (C. P.).—I have not found it necessary to cover with mats after shutting up the frames. With a moist atmosphere and no artificial heat, *Melons* will rarely be injured if shut up at the hours named. Of course much depends on the weather. If the day be very bright and hot, air may be required for an hour or two longer, and in cloudy weather the frames will need closing earlier. No special time can be given for opening and closing *Melon*-frames, the times mentioned relating to general rather than to special cases. With ordinary weather, however, the frames may be closed at the hours named, and no covering of mats is needed; for if any fear be entertained of the sun being too powerful air should be left on some time longer. To make all safe, however, the lights may be covered with mats for an hour, to be then removed. The mats should not, upon any consideration, be left on all night; but the glass must be exposed from May to September, or the plants will be deprived of many hours' light and sun heat.—G. A.

MUSHROOMS (An Amateur of Six Months' Experience).—It matters not whether the Mushroom-bed be in light or darkness. If in light the Mushrooms will be a little browner in appearance, if in darkness they come paler in colour. We think you will find all you want at pages 447 and 448 of the last volume, No. 169. If you wanted more definite information, and stated your means and material, we would advise you more fully. With your experience we would advise you to delay making your bed for a month, unless it were a very shallow one. If you now make a bed of any size, unless in a cool cellar, you will be apt to have too much heat, as the heat of the atmosphere just now is too much for them.

COVERING A VINE-BORDER—AZALEA-BUDS NOT EXPANDING (A. B.).—We would cover the border with fern or litter by the end of September to keep in the summer heat. Very likely your *Azaleas* were dry on the surface of the ball. The plants would be benefited by an out-of-door position in September if the vineries are densely shaded; if pretty well for light they may as well remain in the vinery.

RIPENING SECOND CROP OF FIGS (J. G.).—Your Fig trees planted out in a cool orchard-house and showing a fresh crop of young Figs—say in the beginning of July, will not ripen there unless the autumn is very clear and warm, and you shut up the house early in the afternoon. It will be of no use keeping such fruit over the winter, as most likely if the frost did not destroy them they would drop in the spring. By the end of September you will see; and then if there is no hope of ripening, you can cut off all the fruit that is larger than a good-sized Marrowfat Pea, and let the plants rest in winter by keeping them rather dry at the roots.

SHEDDING GREENHOUSES—SHADING CONSERVATORY (Ignoramus).—We could hardly decide these are so many. Of *Sciarids*, old ones, we would prefer Tom Thumsh, Brilliant, Pansh, and Excellence; for Rose Pinka, Shrubland Rose and Rubens; Pinka, Christine. Of *Noesgays*, none equals Stella as a dark scarlet. Driers such as painters use make capital shading for a conservatory. A quart of milk, an ounce of flour, and an ounce of whiting make also a nice shading. Half an ounce of soda or less to a gallon of water will do for making water soft. Full exposure to the sun for a day is better still. We prefer the quassia without the soft soap.

ARABICA INEQUATA FORMING COSSA (A Subscriber).—It has done so at Bletch and other places.

CONSTRUCTING A VINERY (A Three-years Subscriber).—Your house will be a hipped-roofed lean-to—that is, width 16 feet, back wall 16 feet, front end and walls 3 feet, height of front glass some 6 feet, front sloping glass to join a short hip from the back wall, the ridge from both 17 feet from the floor, length 45 feet. Now, first, your plan will no doubt answer. The main thing for Vines will be to secure drainage. Then for 45 or 50 feet in length, if you propose one end for a greenhouse and the other for a vinery, it would be desirable to have a division with the power to heat one or the other separately or conjointly. This would even be advisable if you wished to have early and late Grapes. In fact, you might force one part and have late Grapes in the greenhouse part. Every place for Grapes we have is filled with plants, except when the Grapes are ripe, when the houses are kept airy and dry. The heating stove would be best placed in the middle. If economy were an object we would have a fixed roof, and give top air by the hipped-roof at back. Anything else you particularly want we will be glad to advise upon.

COMPOST FOR ROSES (Jules Margottin).—You will do well to mix lime with ditch-parings. It should be turned and mixed with black dung and then used. Brick refuse should be laid thickly over the surface, and kept well watered, and then, like burnt field-ashes, it will keep the ground moist. Lime is simply a re-agent, and not a manure. Chalk is an alternative, also, and not a manure. Lime and chalk are best suited to clay lands. Half-inch bones are good for Roses and Strawberries in light lands. So, also, is nitrophosphate.—W. F. RADCLIFFE.

NAMES OF GRAPES (P. M.).—Your Grape is the Hubabee, an Indian variety. **NAMES OF PLANTS (W. E. M., Kilkee).**—*Aster tripolium*. (*Vincet*).—*Spiraea arnefolia*, Sm. The Holly is apparently the var. *platyphylla* (S. A. P.).—1, *Lebeche erinus*, var. *grandiflora*; 2, *Nepeta nepetula*, L.; 3, *Arenaria strotasum*, L.; 4, *Potentilla anemoneifolia*, Lodd.; 5, *Zaberna pendula*, Schn. (*Lex.*).—The specimen sent is not sufficient to enable us to do more than guess that your plant is a species of *Kleisia*. (*M. M.*).—*Comptonia asplenifolia*. (*Glasgow Subscriber*).—*Gymnogramma schrybo-phyla*, a variable plant.

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

JOTTINGS.

Did you ever attend a popular gathering at an Agricultural Meeting—one of those that are peripatetic, go from town to town within the limits of the county, and of which the presence is so beneficial that enterprising towns buy their

favours? Fancy the quiet little town of four or five thousand inhabitants suddenly exposed to the irruption of thirty thousand people! I could name many that I have visited on such occasions, and I like them. Often there is but one real street, the High Street, almost beginning before you get to the town, and ending beyond it. I like the irregularity of it—the dear old church standing on the highest spot in the town, with its venerable square-turreted tower; its almost obsolete sundial on its wall; its grotesque corbels; its old porch, inside which two fat-faced angels have watched those who entered for centuries; its green moss-covered tombstones telling the tale of past and passing generations. Yet it is not indifferent; the glorious flag of old England flies from the belfry, and the bells ring a merry peal all day. There are the old houses with painted gables, latticed windows, and projecting upper stories; the two red brick houses, one belonging to the doctor, the other to the lawyer (why do these professions always choose comparatively modern and red brick houses?); the old inn, probably the George, the Angel, or the White Hart, venerable inside from its old dark oak wainscots, its wide staircase, its long corridors, and its square comfortable rooms; the new Railway Hotel raising its head above its predecessor, and boasting of its marble and looking-glasses; and the High Street in question—good, wide, comfortable street—you might put Regent Street in the middle of it, and leave Lombard Street on each side—in space only, be it understood. The shops lie many feet back from the road and rise from the gutter that carries off the rain. Many have trees in front. Long blinds protect from sun. On these holiday occasions everything puts on its best. There is the head haberdasher, look at his display, and see the number of empty packages he has placed in front to show the extent of his importations. The clothier has baited his trap for the sort of men that will come in charge of stock or on a holiday. The baits used to be smock-frocks and leather leggings, but now they are indescribable hats and caps, fancy neckties, and cheap jewellery, especially watch chains. Why, even the butcher's shop looks attractive. The trees in front keep off the sun, it is scrupulously clean, all the outer part is fresh painted, the back of the shop is thrown open, disclosing a garden, the leaves and boughs gently wave, suggesting a refreshing breeze; the very dead meat looks comfortable.

The neighbouring pleasure grounds and copses have been laid under contribution. During the night waggons have come rumbling in, the spade and pickaxe have been at work during the darkness, and the morning finds an avenue of fir, larch, and beech, huge limbs of which have been put in the ground. Flags of every colour, nation, and society wave in all directions. Garlands and devices attest the taste and the industry of the good wives and daughters (I like the term better than ladies, because if they are one they will be the other), of the place. It is the day of days in the history of the town—not only an Agricultural Meeting, but the Horticultural Show, and the band of the 200th Regiment. Ordinarily the tradesmen of these quiet country towns are men to be envied, compared with the hurried anxious-looking men in London; but for some days before the show and for some days after they are at work night and day. Being an idle man, I have had leisure to watch these things. I was much amused a few years since when dining with some members of the committee the evening before the show. The question was asked who should go to the station to meet the military band. I hardly know why, but no one cared to go. It is a common case for a committee collectively to be all that is energetic, but not a member of it has, or fancies he has, sufficient energy to act alone. It was so in this instance, and the difficulty became so great that they drew lots. The lot fell on the most diffident of all. Like a prudent man, finding it inevitable, he began to make inquiry, and prepare himself; and having ascertained that the band-master of a crack regiment was a superior man, he went home for a night's rest to fit himself for the ordeal of the morrow. The station was nearly a mile from the town, and the time for meeting the band was eleven. I determined to be there. The committee-man was on the platform fidgetting nervously about. The bell rang, and his excitement increased. As the train drew up, men in caps with variegated bands, clad in a white uniform with green facings, could be seen looking out of the windows. I saw my man scan every

one who got out; he was about to address several, at last, like most nervous and unready men, he made the only mistake he could make—he asked the master to show him the master. There is no mistake in addressing the sergeant as the colonel, but *vice versa*. This was a *contretemps*, but he got over it, or, rather, the subject of it saved him with much tact. The band formed outside the station, and the committee-man walked at the head by the side of the master. Then the transformation began; he was wrong, and changed step; he became more upright; he waived his walking-stick like a bâton, beat the measure, and stepped to time; he attached himself to the band all day, and headed it when it returned to the station in the evening.

These gatherings are essentially merry ones. The stream from the station to the principal inns and the show-yard, the country roads full of carriages, from the four-horse drag to the donkey-cart, the pedestrians dusty and travel-stained, all show gay costumes and smiling faces. What a change in costume and appearance! Beards, moustaches, and strange head-gears are the rule! What would be thought of the old heavy beaver of the gentlemen and yeomen, and the dogskin hat of the labourer now, in the days of wiseawakes, deerstalkers, &c., decorated with a flower or a feather? But folk are all merry and good-tempered, and they are pressing to the show-yard. The ladies go off direct to the poultry. It is in a long tent, and that is crowded all day; thence they go to the flowers, then the fruit, and come to their rest where the band of the 200th Regt. is performing. The conductor understands his company, his grand music at the beginning was intended for the sedate world, but as the younger portion come to an anchor round him he glides off into rapid waltz, polkas, and quadrilles. It tells; every foot is beating time, and many a heart wishing for a dance. The male portion of the visitors are soon surrounding horses, oxen, sheep, and pigs. Things would be too smooth if there was not a little uproar. There is a stout man standing by a pen of pigs, and he declares he will have justice if it is to be had for money; and he does not hesitate to say the judges are fools, or something worse, to dispute the age he has put on his pigs. He won't show any more, nor will a good many others; no, nor he won't subscribe, not he.

There is a dinner at the Montmorency Arms at four. All the county members will be there, and all the nobility and gentry of the neighbourhood, and thither the throng wends. Step into the hotel with me. Every room has three or four parties in it. A dozen wait to take advantage of anyone who moves from a table. Bells ring continually, but attendants are few and far between. The extra men hired for the occasion take things coolly, but the regular servants fret, fume, and tear about, and wish the day over at two in the afternoon. Rows of men carrying trays pass in procession from the inn to the Town Hall, where the dinner is held. Fresh salads, pale pastry, drooping jellies, tempt the gaping children. Fore-quarters of lamb, ribs of beef, chickens that show a society for improving the breed of poultry has work to do, hams, and fillets of veal, pass in quick succession. At four o'clock a light cart draws up to the door, and is soon filled with savoury haunches from the parks of the neighbouring gentry. It spins across the road and returns for another burden; and then the business of the dinner begins. The town then takes another character. The shops shut up; the real inhabitants turn out; those who have far to go home, or who dislike a crowd and bother, order their carriages; those who go by train flock to the station. There is an extra staff for the day, but it is useless on the platform. The carriages are forcibly taken possession of, and remonstrance is useless. We once met a superintendant from London on such an occasion who was well up to his work. His carriages were crowded, and he was set at naught. When he said it was the wrong train he was laughed at. But he was a man of resource. He entered his office, and two porters issued from it a moment afterwards, walked the length of the train, crying, "This train for Tring and London only." The thing was well done. The engine gave the premonitory scream, the guard asked if all was right, and had the whistle to his lips, but not in his mouth, when all the carriage doors opened, and disgorged the now frightened though lately bouncable passengers, who, belonging to the many third-class stations in the neighbour-

hood, did not relish the idea of going there *via* London, and paying the difference of the excursion ticket.
(To be continued.)

THE AGRICULTURAL HALL POULTRY SHOW AND THE POULTRY CLUB.

In reply to your correspondent "AN EXHIBITOR," I beg to state that I have neither time nor inclination to enter into the paper war which he appears to wish, particularly as facts appear to have so little impression upon him. To him as to all other of your correspondents I say, Communicate directly, and they shall have all the information I can give. With me the matter ends here.—E. TUDMAN, *an Hon. Sec. to the Poultry Club, Ash Grove, Whitchurch, Salop.*

HOWEVER true may be the remarks of your correspondent "AN EXHIBITOR," I am very certain and at the same time very glad that he is not the delegate, or, as he would say, "the *locum tenens*," of poultry exhibitors generally.

He expresses himself as being "truly amazed" that any one should have the "hardihood" to deny that the appointment of Mr. Hewitt as judge at the forthcoming Islington Show had taken place. I again state that if he had read all the correspondence between you and Mr. Tudman he would have seen that "no such appointment has taken place;" and if he means to doubt the word of the Honorary Secretary of the Poultry Club, who is surely a person qualified to know what the Club is doing, I am the person to be "amazed," and he is the one that possesses the "hardihood." That which your correspondent calls a "palpable fact" is not a fact at all.

In reference to the rules of the Club, this "EXHIBITOR," who appears not to quite understand what he is writing about, wishes to know, "How comes it that they have not been acted on?" In answer to this, the rules are not yet fully compiled, and are at present undergoing revision, which is proved by the limited issue of the copies. I in turn want to know how anything can be said to fail before it has been tried.

In conclusion, allow me to beg of "AN EXHIBITOR" not to write in future upon a subject till he fully comprehends it.—A POULTRY FANCIER.

LEICESTERSHIRE AND WALTHAM POULTRY EXHIBITION.

THIS Exhibition of poultry forms a part of the stock shown at the annual agricultural meeting of this Society, which this year took place at Market Harborough, the object of the promoters (judging by the prize schedule), being more to encourage useful poultry than those breeds which are rather Fashion's favourites. Great care is taken of the poultry whilst on exhibition, and with the well-known Turner's Sheffield pens, the Show was a really well-ordered one. True it is, the number of pens shown were fewer than customary, it being now the midst of the moulting time, as it is certain that fowls are moulting some six weeks earlier than last season—a feature that will tell much in favour of the late shows. Some of the chickens shown were very early birds, as forward as any we have seen this year, and in excellent feather; but the adults, as a rule, were in a state of semi-nudity.

It will be well just to remind our readers, that in Pigeons, however good individually, birds of directly opposed colours cannot hope for success exhibited as pairs, the matching of feather being as indispensable in Pigeons as in poultry.

We were glad to see the Judges marked their disapproval of the quite too common plan now-a-days, of exhibiting two or more ganders in a pen, devoted according to rule to a male and two females. One pen of three ganders, and another of two ganders and a Goose, though the best by far as to size and feather, were most properly disqualified.

The weather being exceedingly fine, without great heat, the number of visitors was most satisfactory, and the Show may be deemed a success.

DORKING.—First, B. Everard, Bardon Hill House. Second, — Sheffield, Geddington Lodge. *Chickens*.—First, B. Everard. Second, T. Burnaby, Upper Lodge, Pipwell.

SPANISH.—First, M. Brown, Ab Kettleby. Second, B. Everard, Bardon Hill House. *Chickens*.—First, withheld, there being no competition. Second, B. Everard.

COCHIN-CHINA (Any colour).—First, A. Guy, Eaton, Grantham. Second, J. Buckley, Desford. *Chickens*.—First, J. B. Hanbury, Clifton House. Second, Capt. T. Wetherall, Loddington. Commended, A. Guy.

COCHIN-CHINA (White).—First, M. Brown, Ab Kettleby. Second, T. Sheppard, Humberstone. *Chickens*.—First, T. Sheppard. Second, G. Sheen, Leicester.

GAMES (Black-breasted and other Reds).—Prize, Capt. T. Wetherall, Loddington. Highly Commended, M. Brown, Ab Kettleby. *Chickens*.—Prize, B. Everard, Bardon Hill House. Highly Commended, Sir W. de C. Brooke, Bart, Geddington Grange.

GAMES (White, Piles or any other colour).—Prize, B. Everard, Bardon Hill House. Highly Commended, H. W. White, Home Farm, Great Crosby. *Chickens*.—Prize, B. Everard. Commended, A. Guy, Eaton.

HAMBURGERS. (Of any colour).—Prize, R. E. Duckering, Northorpe. *Chickens*.—Prize, H. E. Emberlin, Humberstone.

SINGLE COCKS.

DORKING.—Prize, B. Everard, Bardon Hill House.

SPANISH.—Prize, M. Brown, Ab Kettleby.

COCHIN-CHINA (White).—Prize, F. W. Montgomery, Gaddesby.

HAMBURGERS.—Prize and Commended, J. Buckley, Desford.

BANTAMS (Clean-legged).—First, Capt. T. Wetherall, Loddington. Second, H. E. Emberlin, Humberstone.

GAMES BANTAMS (Black-breasted and other Reds).—First, Capt. T. Wetherall, Loddington. Second, A. Guy, Eaton, Grantham.

ANY OTHER VARIETY EXCEPT GAMES.—First, A. Guy, Eaton. Second, W. Chamberlain, Desford. *Cock*.—Prize, G. Sheen, Leicester.

DUCKS (Aylesbury).—First, H. E. Emberlin, Humberstone. Second, M. Brown, Ab Kettleby. Highly Commended, H. E. Emberlin.

DUCKS (Rouen).—First, J. Sheffield, Geddington Grange. Second, T. Burnaby, Upper Lodge, Pipwell.

TURKEYS (Black).—First, J. Johnson, Brampton. Second, J. E. Bennett, Husbands Bosworth Grange.

TURKEYS (Any other variety).—First, A. Guy, Eaton, Grantham. Second, J. Johnson, Brampton.

GESEES.—Prize, W. Kirk, Wymondham.

PROGERS.—Tumblers.—First, F. W. Montgomery, Gaddesby. Second, Right Hon. Viscount Ingestre. *Pouters*.—Prize, H. E. Emberlin, Humberstone.

Bunts.—First, H. E. Emberlin. Second, J. Buck, Leicester. *Jacobines*.—Prize, H. E. Emberlin. *Fantails*.—Prize, W. Draycott, Humberstone.

RABBITS (For the heaviest weight).—Prize, W. Chamberlain, Desford.

ANY OTHER KIND.—Prize, W. Chamberlain. Highly Commended, F. W. Montgomery, Gaddesby.

W. Dolby, Esq., of Rotherfield, and Edward Hewitt, Esq., of Sparkbrook, Birmingham, officiated as Judges.

SUCCESSFUL POULTRY-KEEPING.

As it is more pleasant to hear of success than failure, I am tempted to send you my experience in chicken-rearing this season; and think even the successful poultry-keeper, page 57, will acknowledge himself beaten. I shall be glad to hear if any one has been more fortunate than myself.

COCHIN.—Feb. 11th, 5 hatched, 3 reared; Feb. 22nd, 4 hatched, 4 reared; April 1st, 4 hatched, 3 reared; April 14th, 7 hatched, 7 reared; May 1st, 7 hatched, 7 reared; May 2nd, 8 hatched, 8 reared; May 8th, 13 hatched, 13 reared. Total, 48 hatched, 45 reared.

HAMBURGERS.—Feb. 11th, 6 hatched, 6 reared; April 20th, 12 hatched, 12 reared. Total, 18 hatched, 18 reared.

The first two lots consist of two cockerels and five pullets, and average 4 lbs. 15 ozs. each. The pullets all commenced laying during the first week in July.—K.

BUDE HAVEN & STRATTON HORTICULTURAL AND POULTRY SHOW.

THE eighth Exhibition of this Society was held on Friday, July 29th, in two spacious tents, in convenient grounds immediately adjoining the picturesque little church of Bude, commanding fine views of the Haven and the surrounding romantic scenery for which this favourite little watering place is famed. The Show lasts but one day, so that the birds are not fatigued by too long confinement in the poultry pens. One great disadvantage under which the Society labours is the fact that the nearest railway station is fully twenty-six miles distant, so that whatever birds are sent from long distances have this tedious journey of twenty-six miles to perform by coach before reaching their destination. This necessarily tends to deter amateurs who reside in other counties from sending their birds. There is, however, some talk of a railway being constructed to connect Bude-Haven with the North-Devon line, and if this scheme be carried out, a vast improvement will no doubt be visible there in other things besides poultry.

Considering the drawbacks under which they labour, the Committee succeeded in drawing together the comparatively large number of nearly two hundred pens; and though, as might be expected from the secluded character of the locality, there were several pens showing defects in the matching of combs and legs, yet the great bulk of the birds proved by their appearance and condition that the lessons of former years have not been lost upon their owners, and that very great pains have been taken in most instances to win prizes by intrinsic merit alone. Capt. Davey, an extensive ship-owner residing at Bude, kindly undertook the charge and care of all specimens from a distance, and we are bound to state that the greatest care and attention was bestowed upon the birds while in the pens as to feeding, water, &c., and we have no doubt that the owners received them back from the Show in as good condition as when they sent them off.

Subjoined is a list of the prizes awarded:—

DORKINGS (Coloured).—First, Rev. G. De C. Guille. Second, Rev. A. C. Thynne. Third, J. Brock. Fourth, E. Hoekin. **Chickens.**—First, Rev. J. R. Whyte. Second, Rev. G. De C. Guille.
DORKINGS (White).—First, W. Pickard. Second, Miss Maskell.
EXTRA PRIZE (Given by the Rev. George De C. Guille).—Prize, Rev. J. R. Whyte (Dorking Cock).
SPANISH.—First, R. Hoskin. Second, G. Slumen. **Chickens.**—First, R. Hoskin. Second, Rev. S. N. Kingdon.
MANOCHAS.—Prize, W. Shearn.
GAME.—First, A. West. Second, H. Parsons. **Chickens.**—First and Second, Rev. H. M. Bazeley.
COCHIN-CHINA.—First and Second, A. Trewin.
MALAYS.—First and Second, H. Darch.
CORNISH (Black).—First, — Galsworthy. Second, D. Maynard.
HAMBURGERS (Golden-pencilled).—First, Mrs. Kingdon. Second, J. F. Delmar.
HAMBURGERS (Golden-spangled).—Prize, J. L. Smith.
HAMBURGERS (Silver-pencilled).—First, — Ham. Second, J. Walter.
HAMBURGERS (Silver-spangled).—First and Second, M. L. Lucas.
POLANDS (Golden-spangled).—First, F. Gloyne. Second, J. Short.
POLANDS (Black W. T.).—First and Second, W. L. Trewin.
BARNDOR.—First, W. Vanner. Second, H. Francis. Fourth, W. J. L. Lyle. Third withheld.
BANTAMS (Gold-laced).—First, Rev. H. M. Bazeley.
BANTAMS (White).—First, Rev. G. De C. Guille. Second, W. Allin.
BANTAMS (Black, &c.).—First, W. A. Deane. Second, W. Bromell.
GUINEA FOWLS.—First, W. M. L. Lucas. Second, Rev. G. De C. Guille.
DUCKS (Aylesbury).—First, J. Binea. Second, Rev. R. R. Wright. **Ducklings.**—First, Rev. T. S. Carnew. Second, J. Jewell.
DUCKS (Common).—First, Rev. G. De C. Guille. Second, T. Trewin.
Ducklings.—First, Master T. Symons. Second, N. Pethick.
TURKEYS.—First, G. Bladon. Second, Rev. A. C. Thynne.
GEES.—First, W. Brock. Second, Rev. G. De C. Guille.
PIGEONS.—Carriers.—Prize, Miss Lyne. **Barbs.**—Prize, Miss Lyne. **Pouters.**—Prize, Miss Bray. **Fantails.**—Prize, Miss Lyne. **Jacobins.**—Prize, Miss Lyne. **Trumpeters.**—Prize, Miss Lyne. **Tumblers.**—Prize, J. M. Brand. **Blue Rock.**—Prize, — Larke. **Common Pigeons.**—Prize, Miss Lyne.
RABBITS (Lop-eared).—First, H. Gist. Second, H. Pooley. **Common.**—First, Miss Burton. Second, J. Brimacombe.
EXTRA PRIZE (Given by William Maskell, Esq.).—Prize, H. Darch.
EXTRA PRIZE (Given by the Committee).—Prize, T. Wood.

The Judges were M. C. Ballance, Esq. of Taunton, Somerset; and Mr. Leworthy, of Barnstaple, Devon; and their awards appeared to give entire satisfaction.

DRIFFIELD AGRICULTURAL SOCIETY'S POULTRY SHOW.

This was held on the 30th of July. The following were the awards:—

DORKINGS.—First, M. Hunter, Green Hammerton. Second, Col. Loftus Sunderlandwick. **Chickens.**—Prize, W. Watson, Bishop Burton.
SPANISH.—First, W. Cannan, Bradford. Second, W. Hunter, Green Hammerton. **Chickens.**—Prize W. Cannan.
GAME (Black-breasted and other Reds).—First, H. Adams, Beverley. Second, W. Doyes, Beverley. **Chickens.**—Prize, H. Adams.
GAME (Duckwing and other Greys).—First and Second, H. Adams, Beverley. **Chickens.**—Prize, R. Wool, Lockington.
GAME (Any other variety).—First and Second, H. Adams, Beverley. **Chickens.**—Prize, H. Adams.
COCHIN-CHINA.—First, T. H. Barker, Hovingham. Second, T. C. Trotter, Sutton. **Chickens.**—Prize, S. Robson, Brotherton.
POLANDS.—First, W. Cannan, Bradford. Second, R. Loft, Woodmansey. **HAMBURGERS (Golden-spangled).**—First, W. Cannan, Bradford. Second, S. Campling, Cottingham. **Chickens.**—Prize, W. Cannan.
HAMBURGERS (Silver-spangled).—First, W. Cannan, Bradford. Second, S. Campling, Cottingham. **Chickens.**—Prize, G. Featherstone, Cottingham.
HAMBURGERS (Golden-pencilled).—First, W. Cannan, Bradford. Second, J. R. Jessop, Hull. **Chickens.**—Prize, W. Cannan.
HAMBURGERS (Silver-pencilled).—First, W. Cannan, Bradford. Second, G. Holmes, Driffield. **Chickens.**—Prize, W. Cannan.
ANY OTHER PURE OR DISTINCT BREED NOT PREVIOUSLY CLASSED.—First, W. Cannan, Bradford. Second, R. Loft, Woodmansey. **Chickens.**—Prize, E. Gowden, Bridlington.
FARMYARD CROSS.—First, H. Finkney, Frodingham. Second, D. Dalby, Cottingham.

BANTAMS (Black and White).—First, W. Cannan, Bradford (Black). Second, G. Mossey, Skerne (Black).
BANTAMS (Any other variety).—First, J. R. Jessop, Hull (Gold-laced). Second, T. Holmes, Driffield (Game).

SINGLE COCKS.

DORKING.—Prize, M. J. Grimston.
SPANISH.—Prize, R. Tate, Leeds.
GAME (Black-breasted and other Reds).—Prize, H. Adams, Beverley.
GAME (Duckwing and other Greys).—Prize, H. Adams, Beverley.
GAME (Any other variety).—Prize, H. Adams, Beverley.
COCHIN-CHINA.—Prize, T. C. Trotter, Sutton.
POLANDS.—Prize, T. C. Trotter, Sutton.
HAMBURGERS (Golden-spangled).—Prize, W. Cannan, Bradford.
HAMBURGERS (Silver-spangled).—Prize, W. Cannan, Bradford.
HAMBURGERS (Golden-pencilled).—Prize, R. Mossey, Malton.
HAMBURGERS (Silver-pencilled).—Prize, T. C. Trotter, Sutton, Hull.
ANY OTHER PURE OR DISTINCT BREED NOT PREVIOUSLY CLASSED.—Prize, Col. Loftus, Sunderlandwick.
FARMYARD CROSS.—Prize, G. Robinson, Hornsey.
BANTAMS (Black and White).—Prize, W. Cannan, Bradford (White).
BANTAMS (Any other variety).—Prize, T. Holmes, Driffield.

GEES.—First, Mrs. O. A. Young, Driffield. Second, Mrs. Nicholson, Lower Driffield. **Goosings.**—Prize, Mrs. Robinson, Swaythorpe.
TURKEYS.—First, W. Cannan, Bradford. Second, Mrs. T. Dawson. **Poult.**—Prize, Mrs. T. Dawson.
GUINEA FOWL.—Prize, Mrs. O. A. Young, Driffield.
DUCKS (Aylesbury).—First and Second, W. H. Young, Driffield. **Ducklings.**—Mrs. O. A. Young, Driffield.
DUCKS (Rouen).—First, T. H. Barker, Hovingham. Second, J. Braim, Pickering. **Ducklings.**—Prize, J. Braim, Pickering.
DUCKS (Any other variety).—First, J. Braim, Pickering. Second, J. R. Jessop, Hull (East Indian). **Ducklings.**—Prize, J. R. Jessop (Wild).
PIGEONS.—Carpenters.—Prize, S. Robson, Brotherton. **Carriers.**—Prize, B. Leason, Driffield. **Trumpeters.**—Prize, J. Key, Beverley. **Jacobins.**—Prize, T. Ellington, Woodmansey. **Fantails.**—Prize, J. R. Jessop, Hull. **Tumblers.**—Prize, Miss R. Leason, Driffield. **Barbs.**—Prize, F. Key, Beverley. **Nuns.**—Prize, B. Leason, Driffield. **Any other Variety.**—Prize, S. Robson, Brotherton (Runts).
RABBITS (Best pair of any breed).—First, W. Holmes, Driffield. Second, G. R. Young, Driffield.

EXTRA PRIZES.

BANTAM CHICKENS.—Prize, O. A. Young, Driffield.
PIGEONS.—Prize, J. R. Jessop, Hull (Turbita).
RABBITS.—Prize, C. H. White, Driffield.

The Judges were B. Baxter, Esq., Skipton; and S. Bird, Esq., Shipley.

HASLINGDEN POULTRY SHOW.

This was held on the 28th ult., and we are well pleased to hear that it was a great success. The following were the awards:—

GAME (Any colour).—First, C. W. Brierley, Middleton. Second, J. Turner, Radcliffe.
DORKING (Any colour).—Prize, G. Patter, Fallowfield, near Manchester.
COCHIN-CHINA (Any colour).—First, T. Stretch, Ormskirk. Second, F. M. Hindle, Haslingden.
SPANISH (Black).—First, R. J. Wood, Lower Crumpsall. Second, J. Seddall, Halifax.
BRAMA POOTRA (Any colour).—First, H. Lacy, Hebden Bridge. Second, J. Hinton, Hinton, near Bath.
HAMBURGERS (Golden-pencilled).—First and Second, S. Smith, Halifax.
HAMBURGERS (Silver-pencilled).—First, C. Moore, Poulton-le-Fylde. Second, A. Nicholson, Sheffield.
HAMBURGERS (Golden-spangled).—First, J. Andrew, Ashton-under-Lyne. Second, C. Cowburn, Leeds.
HAMBURGERS (Silver-spangled).—First, J. Andrew, Ashton-under-Lyne. Second, M. Isherwood, Radcliffe.
ANY OTHER VARIETY.—First, H. Carter, Holmfirth. Second, G. Dawson, Rawtenstall.
BANTAMS (Game).—First, J. Munn, Newchurch. Second, R. M. Stark, Hull.
BANTAMS (Any other variety).—First, C. Walker, Halifax. Second, G. Ormerod, Accrington.

SINGLE COCKS.

GAME (Any age or colour).—First, C. W. Brierley, Middleton. Second, T. Dyson, Halifax.
BANTAM (Game).—First, M. Turner, Preston. Second, T. Kanyon, Blackburn.
TURKEYS.—First, C. W. Brierley, Middleton. Second, E. Leach, Rochdale.
GEES.—First, T. Houlker, Blackburn. Second, S. S. Stott, Flaxmoss, near Haslingden.
DUCKS (Aylesbury).—First, E. Leach, Rochdale. Second, F. M. Hindle, Haslingden.
DUCKS (Rouen).—First and Second, E. Leach, Rochdale.
DUCKS (Any other variety).—Prize, T. Hall, Haslingden.

The Judges were Mr. B. Teesbay, Fulwood, Preston; and Mr. T. Dodds, Watkinson Hall, Liverpool.

DUCK ASSUMING THE PLUMAGE OF THE DRAKE.

I beg to add the following to the instances already given of fowls assuming the plumage of the male bird.
 In 1858 I had a lot of Ducks, one of which commenced to

moult in the autumn, and by the following spring was arrayed entirely in the plumage of a drake. In the first-named year she laid, but when habited in drake's costume ceased doing so. She was killed for the table, but no eggs were discovered in the ovary.

This occurred in the province of Luxemburg, where I was then living. No one there had ever seen such a case, although several peasants had had hens which assumed the cock's plumage, and one had returned to the plumage of a hen the next year.—A. S.

CANKER IN PIGEONS.

In reply to Mr. Burton's inquiry, I am afraid his birds have become unhealthy from some cause which shows itself in the breaking-out about the mouth of the cankerous disease to which Pigeons are often liable. It may arise from various causes—too hot or stimulating a diet, as too much hemp-seed, or want of natural condiments; and it has been attributed to dirty water, drinking from tin vessels, drinking the water in which they have bathed, or from mice wetting among the corn.

I have found much good arise from removing the pus and thoroughly rubbing the place with caustic. I have also cured a case by rubbing salt into the part when the matter was removed. By all means let the Pigeons have a little salt. I do not think wheat alone good feeding for Pigeons; lentils, small beans, and buckwheat are a good change. I should be pleased to hear if the caustic or salt proves a cure. In using the caustic care must be taken to touch every part of the sore, or the matter will form again.—BERNARD P. BRENT.

SETTLING PIGEONS IN A NEW HOME, AND LETTING THEM OUT FOR THE FIRST TIME.

THE letter of your correspondent, "J. I. D." in No. 175, suggests the desirability of a few passing remarks on settling or accustoming Pigeons to a new abode, and the care requisite in letting them out for the first time; for, as your correspondent remarks, he has "a crotchet that birds breed better if allowed to fly out." In this he is quite correct; and I may add that the Pigeons will be very much the healthier if they have their liberty, and will be enabled to pick up many little condiments, which all the care of the fancier is but indifferently able to supply. It is, therefore, always advisable to give the Pigeons their liberty when practicable, which in the great majority of cases it will be found to be, most Pigeons being able to fly sufficiently to keep out of danger; and although one or two may be lost from some cause or other owing to their being at large, yet I am convinced that many more die, or are lost, from being kept confined. I would not, however, advise any one suddenly to rush to the opposite extreme, and turn out all his Pigeons without some previous care and discrimination, because a Pigeon that has grown to maturity in confinement and suddenly finds itself at large, becomes bewildered, and gets into difficulties that a young bird would escape, owing to its natural instinct; whereas the older bird, being cramped in its intellect, as it were, is taken off its guard.

It may be as well to inquire what this instinct is. I think it will be admitted that many animals have the power to return home from distant places without any previous knowledge of the road. Few persons but can call to mind some account of cats, dogs, horses, and other animals returning home, when it seemed impossible for them to know anything of the road. I believe it is a faculty by which they have an intuitive perception of the right direction, and follow it by a natural impulse. This is, I consider, instinct, and not at all controlled by reason.

Among the wild Doves or Pigeons there is a difference in this instinct. Some are erratic or wandering in their ways. These are mostly arboreal in their habits, and, except for the purpose of nesting, have no settled home. Such Pigeons may be tamed, but cannot be domesticated, because if let out they stray away, and have no instinct to attach them to any spot. Such is the case with our largest Wood Pigeon, the Ring Dove; whereas the Rock Pigeon has a settled abode to which it always endeavours to return. If it strays

away in search of food, as soon as its hunger is satisfied it returns home by mere instinct as a natural act, without thought or concern. Thus the Rock Pigeon, though such a shy, wild bird, can be domesticated. See how the bee wanders in search of honey, winding and twisting, searching and hunting, from flower to flower, and when filled returning direct to the hive. Cats have been carried away to strange places in bags or covered baskets, and returned home many miles when let out. Many are the stories of dogs, horses, and bullocks returning home by some unexplained faculty. Domestic Pigeons are highly endowed with this power, and have always a desire to return home when at a distance from it. So strong is this propensity that man has been led to take advantage of it, and selecting strong or quick-flying breeds, has trained them to come home from very long distances, and thus to be the bearers of dispatches or news.

Having briefly considered this inherent faculty or instinct of Pigeons, there can be little wonder if an amateur buys a pair of Pigeons and lets them out without due precaution, that the birds will stray away, and probably be lost. A few words on the means to be adopted to lessen this impulse, and, if possible, to create a counter-attraction, is the object of my present letter.

Much difference will be found in the strength of this instinct in different individuals, as also in their powers of flight and consequent capability of following this impulse. A Pigeon that has been brought up in confinement is much in the state of a young bird that has for the first time left the nest, but, if anything, more stupid, and may require care not to frighten it from the roof, or immediate neighbourhood, until it has been in and out two or three times. A Pigeon that has previously been accustomed to have its liberty, and is for the first time let out at a new place, feels no bewilderment, but rather rejoices at its liberty, and sets off at once for its old home, its excursion being only curtailed by its powers of flight. It will depend very much on the counter-attraction set up in the new abode whether the Pigeon returns to it. It will at once be seen how very various is the amount of restraint required to attach a Pigeon to a new home.

My advice to any one when a new pair, or even a single bird, is purchased, is to keep them confined for at least three days in their new house, a fortnight would be safer; but, above all things, to see that the new comers have a private apartment—that is, a nest-place or two of their own, and that they have taken possession and have driven all others from it. This becomes their castle or retreat, and to it they return: if they go out and cannot find their old residence, they will try and return to this new possession. When a Pigeon, or a pair of new Pigeons have been out, and sought in vain for their old house, then, having found their way back to the nest place of their new home, there is but little fear of their leaving afterwards, unless at any time another Pigeon has beaten them from their retreat, when they may then roam in search of a new nest-place.

Ordinary tame Pigeons may be let out three days after they have taken possession. Better flying kinds should be kept in a fortnight. Such as have been accustomed to find their way home from the fields, or have been trained for homing, must be kept in for a longer time if their old home is not too far for them to reach easily, in which case they will have to be brought back two or three times ere they will stop. Sewing a few of the long wing-feathers together to prevent their flying too much at first, or, as some recommend, soaping their wings—an experiment I have never tried—may serve to keep them at home for a few days; but if once they return but little trouble will be experienced afterwards.—B. P. BRENT.

RABBIT-HUTCHES.

It may be of some interest to your readers who are rabbit-fanciers if I state my experience in keeping rabbits in hutches with sparrowed floors. I find they keep the rabbits cleaner and sweeter, and they thrive much better than when on close boarded floors. There is no effluvia from the hutches, and twice as many can be kept in the same space as when on close boarded floors. My hutches with open boards are

very seldom cleaned out, and the rabbits are much cleaner than those that are on the close boards, which are cleaned out daily. The boards are 2 inches wide and half an inch apart.—AN AMATEUR FANCIER.

RABBITS LOSING THEIR HAIR—EARS FALLING TO ONE SIDE.

IN answer to "J. I. D." I have frequently had my rabbits rub the fur off their noses, which is owing to their troughs being too narrow, and upon giving them broader ones the fur soon grows again. As to the young rabbits' ears, out of a whole litter which I had at the commencement of this year every one had both falling on one side. The best remedy is to take them out of the hutch every morning and smooth their ears in the proper position for a few minutes at a time, until you find them remain properly.

As "J. I. D." says that he is a novice as a rabbit-fancier, I think that perhaps he would like to know that I always offer my rabbits water, and in this warm weather I find that they will leave their green food for it. When I first commenced keeping rabbits many fanciers whom I knew told me that it was useless giving them bran. The consequence was that I found the young ones deserted immediately they were born; so I gave them bran, and I have not lost a single one, and they are all in splendid condition. If any gentleman be desirous of seeing them I shall be happy to show them on application by letter to—J. S. BLACKETT, 7, Canonbury Lane, Islington.

PREPARATION OF WAX.

I HAVE failed hitherto in extracting the wax from the empty combs. Will you have the kindness to give directions on this branch of bee-keeping?—CAVENDISH.

[The following directions are copied from "Bee-keeping for the Many." After draining and washing the combs, Mr. Payne says, "Put them in a clean boiler with some soft water; simmer over a clear fire until the combs are melted: pour a quart or so into a canvass-bag, wide at the top and tapering downwards, like a jelly-bag; hold this over a tub of cold water; the boiling liquor will immediately pass away, leaving the liquefied wax and dross in the bag; have ready a piece of smooth board of such a length that one end may rest at the bottom of the tub and the other end at its top; upon this inclined plane lay your reeking bag, but not so as to touch the cold water; then, by compressing the bag with any convenient roller, the wax will ooze through and run down the board into the cold water, on the surface of which it will set in thin flakes; empty the dross out of the bag and replenish it with the boiling wax, and proceed as before until all has been pressed. When finished collect the wax from the surface of the cold water, put into a clean saucepan with very little water, melt it carefully over a slow fire, skim off the dross as it rises, then pour it into moulds or shapes, and place them where they will cool slowly. The wax may be rendered still more pure by a second melting and moulding." The above is the process we have hitherto adopted, with this exception, that we placed the combs in a covered vessel which we stand in a boiler of water, forming in this way a water bath on the principle of an ordinary glue-pot and obviating all risk of over-heating. The operation of straining boiling wax through a canvass bag is, however, so disagreeable and "messy," if we may be allowed the word, that we intend having an apparatus made for the purpose on the plan recommended by the late Dr. Bevan, and which he thus describes in page 259 of the second edition of "The Honey Bee:"—"The kettle I use is in shape like a flower-pot; the strainer is of the same shape but only half the depth, and it drops into the larger kettle full halfway with an accurate fit. The bottom of this inner kettle is perforated all over with very fine holes, and has a couple of ring handles. The rough combs being placed in the large kettle, water is poured in till it rises nearly halfway up the inner kettle, and the whole is placed over a moderate fire. As the wax melts out of the crude mass it percolates through the strainer and floats upon the surface, tolerably free from impurity, from whence, when cool, it is taken off in a cake, for

being re-melted and still further depurated, which may be effected by the same apparatus, varying the use of it a little. The cake of wax just referred to is now put into the upper kettle, and water to the depth of a few inches into the lower; the wax is then slowly melted again, when it will drop through the strainer and swim on the surface of the water, the impurities falling to the bottom. Having been separated from the water and any still remaining impurities scraped off, the wax should be again re-melted with just water enough to avoid burning, and poured into the moulds, the latter having been previously rinsed with cold water to prevent the wax from adhering to them. The moulds should then be placed near the fire and covered over to let the wax cool gradually, or the cakes will be liable to crack. This last melting should be conducted over a very gentle fire—such as wood embers and the like, or the wax will suffer materially in colour, fragrance, and tenacity."]

DEPRIVING STOCKS.

ONE thing I wish to know is, I have worked my eight hives on the depriving system, from six I have taken over 30 lbs. of honey each, and the bottom hives are full, may I take 10 or 12 lbs. from them during the present week?—J. N., Wandswoth.

[If yours are large-sized frame-hives we deem it rather advantageous than otherwise to remove the two side combs during winter, provided there be ample stores in the other combs. It is well when breeding is proceeding rapidly in the spring to fill up the vacancies thus made with empty or full combs according to the necessities of the case. Under any other circumstances than those above indicated we should say, "Leave well alone."]

BOOKS AGAIN!

AND why not? Surely smaller subjects have a great deal written upon them. There are my good friends the apirians of this Journal; what a small subject they have to write about, and yet they go on and on each week—writing about what?—A little gaddy-looking insect, that stings me, and makes honey which is so sweet that I abhor it. But, pray good bee-lover, despise me not, and be not angry with me. I do not understand your hobby, so know not the pleasure it affords you. After all, ignorance is the great foe to enjoyment. A man does not know and so he does not enjoy. To wit, there round my garden walks a high wrangler from Cambridge, who ascends, indeed, with ease the heights of mathematics, and sees much to love in them; but he saunters round my flowers, knowing nothing about them, and, therefore, he receives little or no pleasure from what to me are sources of infinite delight. For, as saith Wordsworth—

"To me the meanest flower that blows can give
Thoughts that do often lie too deep for tears."

Then, again, I have a visit from a wise florist who revels in my roses: he understands, and, therefore, loves and receives pleasure from them. But I presently point out my fowls to him, that noble-looking brave-faced but not cruel-eyed Game cock; those high-bred elegantly-shaped Game pullets, whose plumage, like the dress of a true gentlewoman, is so neat and yet so telling. My flower-loving friend has no eyes for the birds, he has no ears for such a subject as poultry, and merely observes—"Those birds of yours seem very slim and can't have much worth eating on their bones." Yes, ignorance is the greatest foe of all, mark my words, to enjoyment. So I say, Good readers learn, love to learn; and the more you learn, the more you get to understand everything in Nature, the more enjoyment you will have; you will possess "the harvest of an observant eye," that richest of harvests.

I have been watching for some months my sable brothers, the rooks. Last May I watched them in a peculiar way—one eye shut, the other looking along a gun-barrel; but I endeavoured to kill them outright, using a full charge and taking aim at a vital part, the head killing them "as if I loved them," alighty to alter old Isaac Walton.

Now I believe a rook has a conscience or something akin

to it, which I do not think any other bird has. I will give a proof of this. A pair of newly-wedded rooks are building their first nest, they have chosen the site, they have worked hard, and now in the joy of their hearts they go out together for a little relaxation, or, perchance, to some one of Nature's upholstery shops to get some last furnishing for their house. Clear out of sight, a pilfering rook comes, a thief who to save himself labour (Oh! the idle scamp!) begins to appropriate to his own use the materials of this nest. At it he goes, love of mischief makes him for this once industrious, and before the rightful owners return his work is over and he is sitting on a bough near by giving a few complacent caws in the sunshine, looking according to man's judgment as innocent as innocent can be. Young Mr. and Mrs. Rook are returning. On they come, the young husband eyeing fondly his wife, who will to-morrow be the happy guardian of her first egg—when, oh! the uncertainty of sub-lunary happiness! they see their nice new nest sorely damaged if not destroyed. Now what do they do? They at one glance know who is the offender, "That's he," say they; they seem to know him because his conscience or something akin to it makes him look guilty. "Conscience does make cowards of us all," rooks as well as men. At him they go, they buffet him and beat him while the poor conscience-stricken coward utters a peculiar scream and does not offer to fight—he has not the heart to fight, his conscience makes him powerless.

Then, again, about rooks. They walk, and with what dignity they walk! See a number of them on a grass field in the spring, how solemn and imposing is their gait! I have a theory that every bird that walks is possessed of inherent dignity, while a bird that hops has no dignity at all. Even in the extreme case of the smallest British bird that walks—viz., the wagtail, how charmingly he pit-pats along! If he would but abstain from wagging his tail, so belying his name, even that little fellow, tiny as he is, would not be wholly free from dignity; even as it is he looks very superior to the hopping sparrow beside him.

To speak of the wonderful knowledge of rooks is to speak of what everybody knows. Thus, how exactly they find the spot under which the grub lies, not by ear, so, at least, I think. In this respect they are unlike the blackbird, but the eye guides them, they notice the discolouration of the herbage. Indeed, I am inclined to believe that the eye is especially the rook's organ; one glance given, then they dig and dig, and lo! the grub is found. As the rooks come sailing leisurely over my garden on their way to and from the adjacent rookery, I often have a bit of fun with them. Thus, I see an old bird coming solemnly on, slowly, quietly flying as becomes a dignified rook of many years and much experience. When within shot I raise my walking-stick gun-wise to my shoulder, but I cause no commotion—old birds are not to be frightened with sticks; not the least change in his course does my friend make, one little pitying glance at me, and in bird language some remark of this kind:—"Only to think that the rector should take me for such a fool as to care about a walking-stick!" Then, presently, my gentleman comes back, and I now have my gun, and the moment I raise it, then instant the rook changes his course, whirling away from me with another thought in his mind, which I may thus express—"Hollo, Mr. Rector, it's no nonsense this time I see; so good-bye to you and your horrid gun."

As to the plumage of rooks, what a fine, smooth, bright suit of black these my brethren always wear! I should not wonder if they chaff at and despise me when I have my old studying coat on, for it is with them "Sunday's best" all the year round.

I think Shakespeare somewhere says—

"The raven rook'd her on the chimney-top;"

and busy commentators tell us that the old verb "to rook," means "to squat down," but I differ from them. Doubtless, the bard of Avon meant that that ungainly fowl, the raven, tried to look like a rook, or to adopt his genteeler ways. The verb "to rook" does mean, we all know, "to rob," and, as I have shown, some rooks deserve the title of "robbers."

And now good-bye to rooks. Ye who possess a rookery, blessed people! shoot a good number of young ones each spring. Send presents of them to your friends, and "every

one is a friend to a giver of gifts." In regard to those you keep for your own share, order the cook to skin each one and take out his backbone, command her not to be too stingy either with beefsteak or hard-boiled eggs, and then cold or hot (I prefer the former), eat your pie, first saying a grateful grace.—WILTSHIRE RECTOR.

PISCATORIAL.—Our attention was called this week to an eel, at what is called the "Loan Well," at Draffan, it being considered ninety years of age. Mr. Wm. Harvie, Mr. Wm. Pettigrew, and Mr. John Sommerville, vouch for the authenticity of this fact. Mr. Harvie, as the oldest inhabitant, recollects of every yearly cleansing of the well when "Methuselah" was duly put into the pail till the spring gave him his usual element. There is also another of forty years. The patriarch was nearly blind when last handled by Mr. Francis Clelland at the last cleansing.

ORNITHOLOGY.—There is at present to be seen at Miss Gibb's, Auchinheath, a hybrid between the Duck and Hen species, consisting of a Duck in body with Hen legs—three-clawed toes and spurs—out of a sitting of six. When it takes the water, along with brothers and sisters, it will then be seen how its propelling propensity will take effect without the web feet. The old one is at present watching her flock round and round the nearest pool with a maternal care. We believe this is considered to be the wonder of the day in this locality.—(*Hamilton Advertiser*, July 30.)

A MONSTER REPTILE.—The "Geological Magazine" states that Mr. E. Hartsinock, of Charmouth, has recently obtained the most perfect Plesiosaurus ever discovered upon the Dorsetshire coast. It was found between Charmouth and Lyme Regis in a bed of marl, intercalated between two of the uppermost beds of the lower lias limestone. The specimen, 13 feet in length, exhibits the entire dorsal view of the skeleton, with very few bones displaced. The great perfection of the specimen lies in the completeness of the four limbs or paddles, of which not only are nearly all the numerous bones preserved, but they are all, excepting a few of the ultimate small ones, perfectly undisturbed from their original arrangement and relative position. It is gratifying to learn that this magnificent Enaliosaurian relic makes an addition to our knowledge of the liassic fauna, as it is a new species of the genus, differing in important points from those hitherto known. This specimen has now been purchased by the authorities of the British Museum, and will shortly be described by Professor Owen.

OUR LETTER BOX.

AGE OF RABBITS (H. M.).—Very young Rabbits may be known by the woolly appearance of their fur; as they get older their coats become more hairy and glossy. When they attain maturity it may be known by the dewlap, which increases for some time afterwards. Advancing years may be known by the length of claws, roughened coat, the projection of the hip bones, and haggard countenance.

YOUNG TUMBLER PIGEONS DYING (J. E.).—It is almost impossible to say why your young Pigeons die unless you give some better account of their symptoms. Are the old birds too nearly related? as that will induce weakness, and proneness to disease in the young. If the old ones neglect them feed on less stimulating food, as they may be too fat, and consequently idle and careless of their offspring. Wheat is very good as a mixture for the old to feed the young with, but small old beans are better food for a continuance. Buckwheat is also a good change, and lentils are very nourishing. If the young die from diarrhoea, feed on beans and some rice. I suppose the Pigeons have access to gravel, lime, and salt.—B. P. BENT.

POULTRY CHRONICLE (A Constant Reader).—The Poultry Chronicle was incorporated with this Journal some years ago.

LONDON MARKETS.—AUGUST 8.

POULTRY.

There is now a full supply of all sorts of poultry, and the trade falls off daily, and we may now look for nominal quotations while London is out of town.

	s. d.	s. d.		s. d.	s. d.
Fowls	2 6	3 0	Ducklings	2 0	2 3
Smaller do.	2 0	2 3	Rabbits	1 4	1 5
Chickens	1 6	1 9	Wild do.	0 9	0 10
Geese	5 0	5 6	Pigeons	0 7	0 8

WEEKLY CALENDAR.

Day of M'th	Day of Week	AUGUST 16—22, 1864.	Average Temperature near London.			Rain in last 37 years.	Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock before Sun.	Day of Year.
			Day.	Night.	Mean.	Days.	m. h.	m. h.	m. h.	m. h.		m. s.	
16	Tu	Sea Holly flowers.	73.1	51.5	64.3	17	49 44	19 47	20 6	18 3	14	3 48	229
17	W	Artichoke flowers.	73.1	50.5	61.8	20	51 4	17 7	51 6	41 4	0	3 46	230
18	Th	Golden Ost Grass ripe.	73.6	51.8	62.7	13	52 4	15 7	18 7	6 6	16	3 32	231
19	F	Tansy flowers.	73.1	51.8	62.4	17	54 4	13 7	47 7	29 7	17	3 19	232
20	S	Sun's declination 13° 18' N.	72.7	51.3	62.0	16	55 4	11 7	16 8	51 8	18	3 5	233
21	Sun	13 SUNDAY AFTER TRINITY.	72.4	49.8	61.1	13	57 4	9 7	44 8	11 10	19	2 50	234
22	M	Ladies' Traces flowers.	71.4	49.9	60.3	14	59 4	7 7	17 9	23 11	20	2 35	235

From observations taken near London during the last thirty-seven years, the average day temperature of the week is 72.8°, and its night temperature 50.9°. The greatest heat was 92° on the 18th, 1842; and the lowest cold, 32°, on the 21st, 1850. The greatest fall of rain was 1.12 inch.

ORNAMENTAL GRASSES.



GRASSES give a feature to open situations similar to that which Ferns do to those which are shady; some are elegant, others graceful, not a few attain majestic proportions, and all are more or less curious and ornamental. They rank amongst the most attractive and graceful ornaments of the flower garden, and impart a light graceful appearance such as is not afforded by any other tribe of plants. They are, besides, easily cultivated by those who are little versed in horticulture; and in this country the hardy kinds grow freely in most soils and situations, and of such I propose to treat, noticing, in addition, tender kinds which flower in the first year, and

which, though perennials, are not capable of withstanding the winter with us.

PERENNIAL GRASSES.

All or most of these delight in a rich, deep, moist, loamy soil. To do them justice it should be trenched or loosened to a considerable depth, and a liberal dressing of manure or leaf mould worked in if the ground is poor and light. The situation must be open, but sheltered from wind by trees at a distance, otherwise the cold cutting winds of spring and the summer gales destroy much of their beauty. Sunny or warm dry situations, as south borders, are not suitable for them, nor are they adapted for growing in shady places under trees; but open spots on lawns answer well for those which may be planted singly, and ordinary borders for those of smaller growth.

They are increased either by division of the root or by sowing the seed. The first is a ready way of obtaining plants, and is best accomplished when these commence growth in the spring. It consists simply in taking off with a trowel or spade the offsets, with a little root attached to each, planting them in the places required, and afterwards watering them until they become established. The seeds may be sown in the open ground in any description of well-pulverised soil, covering lightly with fine soil. The ground should be kept constantly moist; and a mat, or some such material, thrown over the seed-bed in dry weather will secure a speedy germination. The shade must be removed at night, and discontinued after the seeds have braided. After this they will only require copious supplies of water in dry weather, keeping clear of weeds, and thinning if closer together than one in a square inch. It is desirable, however, to sow them thinly, so that there may be no necessity to thin them until they are of a size fit to handle, when the whole may be taken up and transplanted, or pricked-off into beds,

allowing a distance of 3 inches from plant to plant every way, so that they may grow strong, and when of sufficient size they may be removed with balls to their final quarters. When pricked off they should be well watered, and shaded for a few days until established.

The best method, however, of raising the better kinds of hardy Grasses from seed is to drain a seed-pan or pot one-third its depth with some rather large pieces of crocks over the holes in the first instance, some smaller above these, and over all a thin layer of moss, and then to fill the pan to within half an inch of the rim with any light turfy loam with which about one-sixth of sharp sand has been mixed. Level the surface, and sow the seeds thinly and evenly on it, and cover with a little fine soil, no deeper than just sufficient to hide the seeds; then gently press the surface with the hand or the bottom of a flower-pot. Give a gentle watering through a fine-rosed watering-pot, and place in a house with a gentle heat. The soil should be gently sprinkled with water once or more during the day, so as to keep it constantly moist. When the tiny blades appear and are well up, remove the pan or pot to a cold frame, which must be kept close for a few days until the plants become a little hardened, then gradually admit air, and after they are hardened off, remove the lights in mild weather, drawing them on only when drenching rains and severe frosts occur.

When sufficiently large to handle, pot them singly into 48-sized pots in a compost of rich turfy loam, replace in the frame, and keep them close, shaded, and well watered for a few days until established. After this inure them to the open air, and to secure free growth keep them well supplied with water at the root, giving a sprinkling overhead on the evenings of hot days, which will much refresh them. Dryness is very injurious to Grasses, and a badly-drained soil not less so. Perhaps the soil may be naturally light and dry, if so a liberal application of manure worked into the soil prior to planting will be advantageous; and after they become established water them copiously twice a-week with weak manure water during hot dry weather. Good, sound, and rather strong loam suits the majority of the perennial Grasses, and they do well in clayey moist soil, provided it be drained so as to remove standing water from the under strata or subsoil. When once well established they require but little attention, this being limited to cutting away decayed growths; but in the case of Grasses of doubtful hardiness and those somewhat tender, the dead portions, on account of the protection which they afford the crowns or stools, should not be removed till the fresh growth is somewhat advanced in spring.

GYNERIUM ARGENTUM (Pampas Grass).—This is, perhaps, at once the noblest and most handsome of all Grasses. It likes a moist soil, but flowers most freely in that which is of a rather light nature. As a specimen on a lawn, or exhibited singly or in groups in arbore-tums, and by the sides of or on islands in lakes, it has a charming effect. It is from the plains of South America, grows from 8 to 10 feet high, has proved hardy in nearly all parts of the kingdom, and largely as it has

been planted it is deserving of more extensive cultivation. It is said to form excellent cover for game; the finely-serrated edges of the sword-like leaves, however, cut cloth very readily, and unless dogs, beaters, and sportsmen are well protected they will be sure to suffer.

ERIANTHUS RAVENNÆ.—If anything rather less noble, but more graceful, than the Pampas Grass. It grows 6 feet high, and in habit and general appearance seems to be related to the preceding. The plumes are composed of silvery inflorescence, having a light elegant appearance. On a lawn amid masses of bedding plants it will form an object which will be justly admired for its gracefulness and beauty.

ARUNDO DONAX.—As a noble ornamental-foliaged plant this is unrivalled in its way. It attains a height of from 8 to 10 feet, and has long graceful leaves, which render it especially suitable for lawns, herbaceous borders, and arboretums. It is also specially adapted for planting on the margins of lakes, pools, and on islands, as it delights in moist soil. It should therefore be well supplied with water in summer when planted in light soils.

ARUNDO DONAX VARIEGATA.—Similar to the above, but with long, broad, elegantly decurved leaves, 2 or 3 inches broad, and from 2 to 3 feet in length, marked with broad silvery stripes their whole length. As a specimen on a lawn, amid bedding plants, or masses of green foliage, it forms a stately and picturesque object. In borders it stands out in bold relief among plants of more humble growth; and planted near lakes it forms a highly ornamental feature, whether examined close at hand or seen at a distance. As a centre bed or neuter it is unique, beautiful, and tropical in appearance. It is unrivalled as a decorative plant when treated as an exotic in the conservatory. It delights in rich deep moist soils, and not being so hardy as the species, it requires slight protection in winter in cold, low, and very elevated situations. Height from 6 to 10 feet.

PHALARIS PHRAGMITES (Striped Ribbon Grass, Ladies' Traces, Gardeners' Garters, &c.).—This is a very common and a very fine Grass. A clump of it growing from 3 to 5 feet high on lawns is no despicable object, and in patches in borders it has a fine effect. It also forms a splendid back row to a wide ribbon-border, and is charming as an edging to large beds, such as those containing Dahlias and Hollyhocks. A deep rich soil is necessary, in order that it may attain its full growth when planted in groups; but it will grow almost anywhere, and for this reason does not receive that attention it so justly merits.

BAMBUSA METAKE (Evergreen Bamboo).—An elegant tree-like evergreen, and grass-like withal. For ornamental purposes this will be much sought after; and if it prove hardy, as it has done as far north as York, where it has made shoots nearly 10 feet high, it will soon be found in every garden where a tropical appearance is appreciated.

BAMBUSA GRACILIS.—A slender and most graceful tree-like Grass. The stalks are erect, their extremities arching gracefully; and the bright grass-green leaves drooping and lashing the breeze, it is a charming object on a lawn, in arboretums, and wherever grace and elegance are desired. Though hardy in many situations, with me in Yorkshire it was cut down to the ground with 20° of frost, and completely destroyed by the severe frost of December 25th, 1860, when the thermometer was at 3° below zero. In warm sheltered situations it resists frost well, and though occasionally cut down to the ground in winter, new shoots rise from the stool, and attain a height of from 4 to 6 feet. It is very handsome and distinct.

BAMBUSA NIGRA (Black-stemmed Bamboo).—Of rather stronger and more erect growth than the last; and having black or brown stalks. This also, like the preceding, is of doubtful hardiness, and is generally cut off to the ground in winter. It rises from the stool in spring, and attains a height of several feet (occasionally 8 feet), and has a stately and tropical appearance.

BAMBUSA FORTUNI VARIEGATA.—A tree-like Grass with exquisite markings like Ribbon Grass. This, if hardy, as it is expected to be in dry soils and sheltered situations, will be a great acquisition. It is one of the most beautiful plants in cultivation.

STIPA PENNATA (Feather Grass).—This is found naturally in rocky places, and is a singular ornamental Grass, growing 2 feet high. Much of the beauty consists in its awns, which

are feathery, and from 6 to 9 inches, and occasionally 1 foot, in length. These gathered and dried form fine ornaments for sitting-rooms, and are not unlike so many Birds of Paradise. It is both beautiful and graceful even when growing, and one of the curiosities of Nature.

FESTUCA GLAUCA.—Elegant, with a glaucous aspect. 1 to 1½ foot.

ELYMUS GIGANTEUS.—Elegant and fine. 4 feet.

ELYMUS HYSTRIX.—A curious and fine Grass, with awns like a porcupine. It is from the Crimea. 2 feet.

STIPA GIGANTEA (Giant Feather Grass).—Rather tall (3 feet), very curious, and handsome. It is from Spain.

STIPA JUNCEA.—Rush-like, curious, and fine. 3 feet. France.

HIEROCHLOA FRAGRANS.—An elegant dwarf Grass, and sweet-scented. 1 foot. North America.

BRIZA MEDIA (Trembling Grass or Mediate Quaking Grass).—Well known, pretty. It abounds in many pastures and meadows. 1½ foot. Britain.

MELICA ALTISSIMA.—Highly ornamental. 4 feet. Siberia.

MELICA NUTANS.—Curious and fine. 1½ foot. Britain. (Mountains).

MELICA UNIFLORA.—Pretty and of humble growth. 6 ins. to 1 foot. Britain.

AIRA ARUNDINACEA.—An elegant reed-like Grass, attaining a height of 3 feet.

A. CÆSPITOSA VARIEGATA.—A fine striped Grass. Makes a splendid row in a ribbon-border, and is pretty in borders. 1 to 1½ foot.

AIROPSIS CANDOLLEI.—A curious small Grass, worthy of a place in every garden. It is named in compliment to De Candolle.

TRICHOCHLOA FOLIOSA.—Of dense growth though small. Curious. 1 foot. North America.

TRICHOCHLOA LONGISETA.—Elegant and curious on account of its long awns. 1 foot.

CERESIA ELEGANS.—An evergreen and fine Grass. 2 feet. Peru. It is only hardy in warm situations.

CENCRUS SPINIFEX.—A Grass producing thorns. Very curious. 1 to 1½ foot.

PIPTANTHERUM PARADOXUM.—Tall and curious. 3 feet. France.

PANICUM PROLIFERUM.—Curious. 1 foot. North America.

ARUNDINARIA MACROSPERMA.—A large, fine, reed-like Grass of noble proportions, often attaining a height of 6 or 8 feet. North America.

TRIPACUM DACTYLOIDES.—A very elegant and really ornamental Grass. 4 feet.

MILIMUM MULTIFLORUM.—Fine. 1½ foot. South of Europe.

ANDROPOGON ARGENTEUM.—As its name implies, this has a silvery glaucous aspect. It has a fine appearance. 2 feet.

DACTYLIS GLOMERATA VARIEGATA.—A variegated form of the species, growing about a foot high.

D. GLOMERATA VARIEGATA ELEGANTISSIMA.—Rather more dwarf than the last, with broader and more evenly-striped leaves. It is of dense growth, and furnished to the soil, towards which its leaves droop gracefully. It withstands drought well, and also wet, and is one of the finest variegated plants for edgings, ribbons, and general decorative purposes.

The above are some of the most ornamental of the Grasses, but many others, the names of which do not occur to my mind just now, are curious and pretty.

I have omitted mentioning three varieties of the Pampas Grass, because I wished to ask if any of your readers have succeeded in obtaining new varieties of Grasses by adopting other means than cultivation. Most of our improved varieties of cereals are accidental sports. Cultivated plants are more liable to sport, especially when several generations removed from the original type, than those under indifferent cultivation, or in an almost wild state. The Pampas Grass was but recently introduced, and we have three distinct types of the species—viz., *Gynerium argenteum floribundum*, which has larger and denser inflorescence than the parent; *G. argenteum roseum*, the panicles of which are of a fine rosy hue; and *G. argenteum elegans*, which has snowy white plumes, presenting a tufted appearance, yet having a sub-conical outline, and drooping in character. Altogether this is the finest form of the species, and presents a combination of elegance and effect in its foliage and bloom found in few plants.

Then, as to variegation, will seed from a variegated Grass produce variegated or plain-leaved plants? Geraniums, I am aware, will produce both, some variegated, and others green, the one further from the type, but the other reverting to it, and this when impregnated with the same pollen. Geraniums, however, have been so crossed that they will sport in almost any way; but from seed of a variegated plant but once removed from the species, will the progeny be like the parent, or revert to the original type? In other words, is variegation continued by the pollen, or is it peculiar to the individual plant? and will the pollen of a variegated plant have any effect in producing a variegated progeny if applied to the stigmas of green-leaved plants? Some speak of variegation as if they could accomplish it at will; but it appears to me as if Nature was the most prolific source of variegation, and that man has very little, if any, control over its production.—G. ABBET.

(To be continued.)

MY ORCHARD-HOUSE.—No. 7.

I CANNOT help expressing how flattered I am at the kind praise of my good friend Mr. Rivers. It is a great inducement to continue my efforts to develop and promote the "good cause," as Mr. Rivers used to call it in our former correspondence. And that it is a "good cause," it would be easy to prove from the interesting letters received here on this subject alone. There is a very great demand for knowledge up to the present hour, and nothing could be more acceptable than information such as Mr. Rivers suggests—namely, as to the date of fruit ripening in different localities—in orchard-houses of course. In this way data of great value to any amateur about to erect an orchard-house would be obtained. He would thus know at once what sort thrives best in his neighbourhood and situation; and also ascertain the periods at which he might depend on fruiting the various sorts in succession, so as to have no waste, nor find his fruit ripening just when he did not need it.

Orchard-houses being a new structure, the periods of ripening in out-door fruit could not be a safe guide—indeed, in the case of Peaches, would be none at all. We are on the eve of the introduction of quite new classes of fruit, which themselves will become, as Mr. Rivers says, alluding to that remarkable new Peach, the Honey Peach, "the parents of quite new races." Any one who has tasted this Peach will be satisfied on this point. It has a strange tropical flavour quite peculiar to itself. So has Golden Purple, a Georgian Peach. This last has the flavour of rose water, and is a fine fruit, something like Noblesse. If this be true of Peaches, it is equally so of Plums and Cherries. Many of the new American sorts are delicate and worthy of in-door cultivation. How important, then, to ascertain clearly which sort is suitable for the north and which for the south. Nothing vexes and discourages amateurs so much as making mistakes in these matters. We are, most of us, people of moderate means; we like our orchard-houses, but we dislike their becoming expensive, and, besides this, unprofitable. I have seen men build such houses, stock them unadvisedly, then become discouraged, leave them to ignorant servants or gardeners of the old school (who hate these new-fangled things), and the end has been, that much money has indeed been wasted and orchard-houses decried.

Now, it strikes me that the more information we amateurs can give each other, the less frequent will be failures in future. The Editors have kindly consecrated a column to us, so let us endeavour to put it to profit. Let us, then, do as Mr. Rivers suggests, begin by comparing dates of fruit ripening, for this is just the season.

Last week I had a letter from a clever amateur living near Dundee, 450 miles north of London, and 650 north of Guernsey. He describes his fruit culture accurately, and certainly the difference of situation is enough to make comparisons between our houses.

Suppose, then, I had one hundred such correspondents from various parts of England, each describing the period of ripening in Peaches, Plums, &c., their sizes, and the shape, dimensions and aspect of the house, I do not hesitate to say that all this information could be arranged in two or

three columns of THE JOURNAL OF HORTICULTURE, that it would be a labour of love to me, that it has never before been attempted, and that only by means of such a Journal as this could such valuable matter be brought together at so little cost. At a glance would be seen how certain fruits ripen in their respective zones, and how great a difference 600 or 800 miles would make in the same fruit, whether east or west had any advantage, and how many days could be gained by situation or form. To my mind, nothing in orchard-house culture is more important. I have myself helped to organise and plan ten or twelve houses, and feel a certain responsibility as to their welfare, and how best to work them. Probably we should find lean-to houses much a-head in point of time, and large, well ventilated buildings doing best of all.

One other point is of much importance. Do orchard-houses gradually and steadily, without falling back, advance the period of fruit's ripening? I am convinced they do; but I should like to have the opinion of some others better able to judge. If they do thus advance the ripening of many fruits, what a precious gain have we in this! Time is everything in fruit culture. Time is money when we out-strip the market by even a week. In our own case, by carefully selecting the sorts, and by the above-mentioned hastening of their previous ripening, we are able to send fine Peaches and Nectarines, grown in an unheated house, in time for the London season. We should also be able to compete with Algerian Peaches in the Paris market, we being, as it is, a fortnight in advance of Montreuil. But this was not the case six years ago for example, and it is the result of careful attention to the nature of the fruits.

Orchard-houses are rising up in the Channel Islands (mine being the original one), and, as we export Grapes largely, it may happen that we shall, by-and-by, export Peaches also. Therefore, it is well to know certain facts before these houses are organised for this trade. What is advantageous for the Channel Islands must also be so for Devonshire and Cornwall; at least, we have much to contend with—much rain and continual wind, with cloudy skies. Only our autumn, long and warm, stores up heat, as also does the sea around us.

By this date about one-half of our fruit is gone. I have just measured Exquisite, and it is already about 10½ inches in circumference. Stump the World, a splendid Peach, is not so advanced in size this year, but shows signs of becoming earlier. Hunt's Tawny Nectarine I recommend to amateurs. It is a little inclined to be bitter, and is a little below medium size, but it is early, and bears well. Rivers's Orange Nectarine is a great favourite with the ladies. Its colour, luscious flavour, and fertility, are admirable. I speak of it as getting over, it is so early with us. Violette Hâtive and Elruge are also nearly over, except in the east or late house. Brugnion Imperial has been ripe since the 7th. In a basket from one large cordon tree the fruit weighed about 4 ozs. each, and were, generally, 8 inches round. The flavour and colour were first-rate, and it was the same with Crawford's Early Peach, from one bunch of which we selected twenty-seven, gorgeous in colour, and about 9 inches round, on the 30th of July. Duchess of Oldenburgh is a great acquisition. It contrasts admirably with the darker Nectarines. It has been ripe since the 6th. This kind has actually advanced in three years, from the 18th of August to the first week, or about twelve days. Acton Scott is no favourite of ours. Ever since Early York has been introduced, its day seems gone. Pêche Abec, which is always a remarkably fine Peach, is never prolific. After trying it in many forms and places, it remains a grand fruit, but not fertile. It is also one of the few stationary in period of maturity, ripening July 29th, 25th, and 25th, during the last three seasons. Golden Purple has advanced from August 4th in 1862, to July 20th this year, without diminishing in size or appearance. It is first-rate. Brugnion Violet is just ripe, and very prolific. Is not this our Roman? It is not, however, a clingstone. Belle de Doué was ripe from the 19th of July. As a diagonal cordon in a warm place, it has advanced thirteen days in eight years.

I hope, however, to prepare another article to prove how, among seventy varieties of choice Peaches and Nectarines, nearly, if not all, have advanced gradually, without deterioration of quality (which is the danger), from five to twenty

days in the course of eight years. I have kept notes during this period sufficiently to ascertain this, and for the last four years with great care.—T. COLLINGS BRÉHAUT, *Richmond House, Guernsey.*

SIR JOSEPH PAXTON ON THE ROYAL HORTICULTURAL SOCIETY'S EXHIBITION.

THE following letter has been addressed to the Assistant Secretary by Sir Joseph Paxton, M.P.:—

"7, Pall Mall East, London, July 20, 1864.

"SIR,—Having been requested to give my opinion as to the nature and character of Exhibitions which the Royal Horticultural Society should encourage for the true advancement of Horticulture and its accompanying sciences, I have drafted out this letter, in order to form a foundation, or data, on which this matter can be discussed, and I trust with a good result.

"1. No doubt the result of the Society's Exhibitions has, in many respects, been very advantageous to the cause of Horticulture, particularly the earlier ones. They have encouraged great improvements in the culture and management of plants, particularly in such plants as can be produced in flower at what may be called the London fashionable season; but they have by no means been productive of unmixed good. They have brought into existence an unnatural and artificial condition of things, which is not only objected to in the interest of gardeners themselves, but is also opposed to the interests of the public, by causing what may be termed a spasmodic effort and exertion, which at other seasons of the year is unemployed and, to a great degree, unproductive. I may illustrate this by stating that a good many years ago (and the same state of things now exists to a certain extent), I called to see a first-class London garden, forgetting that it was one of the exhibition days, and I found only about six or eight plants in the garden, the others having all been trained, like a horse, for racing, and had been taken to the show to win the stakes. In the same season, some time after this, I called again, and found the plants, having been their round of racing, all flowerless, and beginning to be placed under training for the next season for the same purpose; and this training was effected by keeping some plants back and forcing others, so that they might all flower together, and such plants as would not bear this treatment were not cultivated.

"2. Every one, of course, says he has a right to do what he likes with his own plants, which I do not deny; and if a gentleman does not mind being ten months in the year without flowers in order to make this great display, I have no fault to find with him; all I contend for is, that should not be the main aim and scope of the Exhibitions of the Horticultural Society. In one respect the Exhibitions of the present day have produced a good result by giving prizes for collections of beautiful-foliaged plants, as the culture of these plants, which look beautiful all the year round, is thus stimulated, and they are a great improvement in the garden.

"3. But in other respects these great show-cultivators grow very few plants which do not flower at the show seasons, and therefore leave the flowers which might be cultivated with great effect for other seasons of the year without much attention.

"4. The true object of Horticulture should be, in my opinion, to increase the enjoyment derivable from it, and to diffuse it as widely as possible; to enable the owners of gardens to get the greatest amount of pleasure and satisfaction from their possessions; and to enable the general public to procure the greatest number of fruit, flowers, and vegetables in the greatest quantity, of the best kinds, and at the cheapest prices.

"5. In order to carry out this, there should be something like a continuous exhibition, so that a gardener would have no interest in forcing his plants unnaturally into flower; but if he had a beautiful specimen at any time he would know he could exhibit it where it would be seen and appreciated, and its merits rewarded. When the Horticultural Society was in its palmy days, one of its great sources of benefit and attraction was the fortnightly shows at their great room in Regent Street. It was then the practice for

any gentleman in the country, if he had a new plant or a new fruit, to send it to one of these exhibitions at any time in the year, and the nurserymen brought every new plant there from their respective establishments. Dr. Lindley explained the nature and properties of everything as it appeared in each exhibition in his lucid and agreeable manner, in which on this subject he has no rival, and these meetings were intensely fashionable, and often densely crowded.

"6. When the Horticultural Gardens at Chiswick were the leading gardens in the country for new plants, many gardens were supplied thence, and so they were never without great interest. They could not trust altogether to country gentlemen and nurserymen for plants for exhibition, and when the entries were deficient the shows were made up of beautiful plants from the Horticultural Gardens, though then a certificate of merit from the Society meant something, and was prized at a high rate; it insured the sale of any plant which received it, and often practically represented a prize of some hundreds of pounds sterling, as many nurserymen had orders before the exhibition closed for very large amounts. It therefore appears to me that these fortnightly exhibitions should be renewed at once, and every attraction given to them; and, considering the increase of commercial transactions relating to Horticulture, the facility of carrying anything from a distance, and the great influx of visitors into London in the season for a temporary sojourn for the spring and summer months, it would be well to try a weekly exhibition without the descriptions, which, in point of fact, would almost amount to a continual show; and they should be held in a place suitable for plants, where many nurserymen would not mind allowing them to remain all the time they were in full flower. One or two of the great shows might be still held in the Gardens, where the fashionables could attend to show themselves and look at each other, which they do on these occasions quite as much as at the flowers.

"7. It would be too much in a letter of this sort to go into details as to how many branches of Horticulture have remained stagnant for many years past; though it would not be irrelevant, it would occupy more space and time than I can now afford to give to it. But there is one subject that has pressed upon me so long, and I am so convinced of its damaging effects upon the commercial part of the supply of the finer fruits in the public market, that I cannot help reverting to it in this letter, and that is, the growth of fruits for sale by private establishments, in competition with the market gardeners. Many gentlemen keep gardens, partly for their own use, and partly for the sale of the produce, which they sell to cover part of the gardening expenses; and this is done to a very large extent, and by some of the highest private garden establishments in the country. The result is, that fruit, with all the facilities of cheap glass and cheap coal all over the country (compared with forty years ago) is absolutely dearer than it was forty years since: while the produce of real market gardens is perhaps 50 per cent. cheaper, and 100 per cent. better, the forced fruits in which the private establishments compete have made very little progress in goodness. If you went to Covent Garden Market between thirty and forty years ago and looked at the fruit, you would find the fine Grapes were grown by Mr. Andrews, the great market gardener at Vauxhall, Mr. John Wilmot, of Isleworth, or some other good market gardener of the day: whereas, if you go there now, the same kind of fruit is from some private garden; and supposing a large quantity of fruit is wanted for a big party, none of the great fruiterers will undertake to supply you until they have written or telegraphed to some private establishments to know what they can get.

"8. The first question that naturally strikes you is, How is the public worse off for this change? I can answer this, I think, to everybody's conviction, in a few words: A private establishment will very often sell in the early season 1 lb. of Grapes or a dozen Peaches, regardless of cost, at a price which it would ruin a market gardener to attempt. This price will content a private gentleman who does not know the cost of growing them, but competition at these prices would ruin any market gardener, who is nearly deterred from growing them at all; and, therefore, the regulation of the supply of the market is left in the hands of these limited

private establishments. If the market gardeners were not met there, they would try to exorcise each other in the cheapness and goodness of the fruit, as they do in all other things, and in a short time the market would have a regular supply at half the present cost of spring fruits, which is not attempted now on a scale large enough to compete with the great number of private establishments which send the best of their things, and pocket their losses, and the public have in consequence a very limited supply. I daresay it answers the purpose of the fruiterers very well, but it is very detrimental to the public.

"9. And now, sir, before I close my letter allow me to say a word or two about what is done in the sale way by the Royal Horticultural Society. It is quite legitimate and right to propagate and distribute any new plants (which it has brought into the country), to Fellows, but I object in toto to buying new plants, cultivating them, and balloting for them; this is, allow me to say, an infringement of the legitimate business of the nurserymen, who can do it much better and cheaper than the Society can.—I am, sir, yours very truly, JOSEPH PAXTON."

"PROCEEDINGS OF THE ROYAL HORTICULTURAL SOCIETY."

THE August, September, and October Numbers, all in one! of the "Proceedings of the Royal Horticultural Society," have come to hand, and we thus learn that, on the 28th of August, there is to be a "Show of the trial flowering plants and fruits at Chiswick, with promenade." Now as the 28th of August is a Sunday, and not a Saturday as announced, it would be as well if the Assistant Secretary informed the Fellows which is the day on which the promenade is to take place. We are told, also, that there is to be, on the 7th of September and following days, a Show of cut flowers of all the autumn-blooming florists' flowers. As the Crystal Palace Company have also for some time announced their great autumn Flower and Fruit Show for the same days, would it not have been to the interests of the Royal Horticultural Society if another occasion had been chosen for their autumn Show? Greater lights always outshine the less, and we know what chance the South Kensington Show will have against that at the Crystal Palace, when both are held on the same day. Is the Assistant Secretary away wool-gathering again?

GARDENING IN INDIA.

PERHAPS it may interest your readers to hear something of the plants usually seen in gardens in India. I shall speak only of central India and the N.W. provinces, Bengal Presidency. And first about Roses.

There are not many Roses generally known. I had but fourteen kinds, and few people, I believe, were in possession of half that number. I had pink and crimson China, white and pink Gallica (from which Rose water and attar are procured), the Bourbon (called in India "Rose Edward"), Multiflora, Microphylla, Dog Rose, Hill Rose (a beautiful evergreen double white climber), white and yellow Tea-scented, Musk, a very small cluster Rose blooming only in hot steaming weather, and the double yellow Cashmere Rose. This did not bloom with me, but, judging from the leaf, I suppose it to be the Persian Yellow.

The Tea Rose is worth all the others put together. I only speak of the white—Devoniensis I think it was; the yellow had not bloomed with me before I left India. From November to April the Tea Rose was a picture of beauty. During the hot season it was not worth looking at, but in the cold nothing could exceed its beauty and luxuriance. I took notes of one that I had especially cared for. When two years old it was 4 feet in height and 12 in circumference. One morning in February I counted ninety-one blossoms fully opened. The centre of some was bluish, of others yellow, and those a day old were edged with the loveliest lilac. The buds were innumerable—I should rather say I became tired of reckoning them when the number reached six hundred: there certainly were more than double that number. A native in charge of one of the public gardens came one day to see one of my Tea Rose trees. He went on his knees to examine it, and for some minutes

said nothing but "How beautiful! how beautiful it is!" He was really fond of flowers, and had never seen it before. I wish I could make Tea Roses grow with me now, but they constantly die off. I suppose I cannot get out of the Indian way of treatment.

Many of your readers, probably, have relations or friends in India, and perhaps would be glad to know what seeds would grow easily there if sent from Europe. Stocks grow splendidly; so do Camellia and Rose-flowered Balsams. Petunias will take possession of any ground in which they are sown, but they seem to have new varieties every time they bloom. Verbenas also spring up self-sown. Salvia patens grows well, as do many others of the same genus—one is a native of India. In the hills Pelargoniums bloom beautifully. A gentleman once told me his plants usually had eleven in each bunch of flowers; indeed, I saw many of his with that number. Fuchsias also grow well; but almost any flower will succeed in the hills.

No one can have an idea of the splendour of the Camellia and Rose Balsams in India. Of course the climate is suited to them, but these varieties are unknown except to a few. I have seen plants 3 feet high and the same in diameter loaded with enormous blossoms, so that scarcely a leaf was visible.

I must now tell of a sight I once witnessed and which I can never forget. At a station in Bundelcund I one year had some superb beds of Stocks. They were from German seed, and I do not think there were a dozen single-flowering ones in as many beds. One morning I had just left the garden, when I was recalled hastily and eagerly by a servant. Much surprised at the man's apparent excitement, I ran quickly to the trelliswork at the entrance where he stood, making signs to me to come as quietly as possible. He whispered, "Look at the 'Ishstocks!'" as he called them. There were ten or twelve large beds full, each with distinct colours. There, balancing themselves in the air, many with their long bills inserted in the blossom, were multitudes of tiny birds, looking like living gems, fluttering and glancing in the sunlight. I suppose they were humming-birds, but it is impossible to give an idea of the beauty of the sight. They showed to most advantage on the white Stocks, almost every blossom of which had a ruby and emerald or sapphire birdie enjoying itself amazingly to all appearance. There were about thirty plants in each bed, and the spikes of flower a foot in length, and all covered with these living gems. I stood in silent admiration, until, all at once, they disappeared as suddenly as they had come. The native (an old man), assured me he had never even heard of them before. They were never, to my great regret, seen again during our residence there.

The shrubs, bulbs, and climbers at this station were very beautiful—more so than at any place where I had previously been. I cannot conclude without saying that I believe the Bourbon Rose is a native of India. I have trespassed too much on your space to give my reasons now. If these scattered notes are acceptable I shall be happy to add to them at some future time.—TSA ROSE.

[We shall be glad to hear further from you on this interesting subject.]

NEW APRICOTS.

I HAVE the pleasure to send you a small box of fruit containing three varieties of Apricots, and one early Pear.

No. 2. Royal de Luxembourg, you already know. [This is a variety of the Peach Apricot, having a covered channel on the back of the stone, and a bitter kernel. It is smaller than the Peach Apricot, and very richly flavoured.]

03 is De Jonghe's Sweet Kernel Apricot, the seedling tree of which produced in 1863, 5330 fruit. This year it has more, and we have already gathered 1530. I have fruit on trees four or five years old, and upwards of thirty seedlings from the same varieties.

[De Jonghe's Sweet Kernel Apricot is a small fruit about the size of what is cultivated in this country under the name of Breda. Judging from the shoot which Mr. De Jonghe has sent, the tree is a prodigious bearer. The shoot is a forked one, and on a space not more than 7 inches long there are

twenty full grown fruit, set as thick as Bullaces. The flavour is very excellent, and the stone is as sweet as an almond.]

09 is De Jonghe's Diamant. I consider this variety the most beautiful and the best that exists in cultivation at the present time. The seedling tree is healthy, hardy, vigorous, fertile, producing fruit superb in form, and of exquisite flavour at its perfect maturity. As the diamond among precious stones surpasses all others, I have, by analogy, designated my Apricot by this name, associating it with my own as the raiser of this variety.

[This is allied to the Peach Apricot, and considering that the fruit sent us has been grown upon a standard in the open ground, the state in which we received it indicates an early habit. It was not, however, sufficiently ripe to enable us to judge of what the flavour will be when at its perfect maturity. The fruit is large and handsome, and the tree appears to be very fertile, judging from the quantity of fruit on the small spray.]

No. 878 is Fondante de Cuerne Pear. Cuerne is the name of a village near Courtrai (Flanders). The popular name of the Pear is Suiker Peer (Sugar Pear). It ripens during the last fortnight of August; but on the Pear stock in strong, cold, humid soils, the maturity of the fruit is prolonged to September. I will send you perfect fruits in the next package, or in the end of the month, with two other early varieties.

Notwithstanding a very great heat, and a continued dryness, accompanied with violent winds, the Pears are unaffected on the trees. This year we shall see many of my seedlings in all their perfection.—J. DE JONGHE, Brussels.

CARHEAD, YORKSHIRE.

CARHEAD, the seat of W. B. Wainman, Esq., lies quite out of the way of tourists and travellers, up in the pretty and romantic district of Wharfedale, and is more frequently visited by agriculturists than horticulturists; for who has not heard of the Carhead pigs and their achievements at the various agricultural shows in the kingdom? We have before described this place in our pages at a time when flower gardening was the chief feature; but this department has been greatly curtailed, and attention is now devoted chiefly to fruit-growing. On the lawn and near to it, are a few noble specimen Conifers—*Abies Douglasii*, 40 feet high; *Pinus cembra*, 20 feet high, and very symmetrical; an *Arbutus procera*, 15 feet high and well berried, standing out perfectly hardy on the lawn. There are glorious specimen Thorns, and a fine collection of them; and these and the large quantity of Rhododendrons about the place alone create a superb display of flowers in the spring.

The old vineries adjoining the lawn and close to a mass of large trees on the west side, have hitherto not produced fruit of fine quality, and have been very subject to shanking; but Mr. Ascoug, the present gardener, last winter covered the border with canvass, commencing in September, and in February commenced using hot dung over the roots in addition to the canvass, replacing the dung as it became exhausted. Previous to doing this Mr. Ascoug removed the old surface soil as far as the roots and replaced it with fresh. There are now by far the finest Grapes seen at Carhead for many years, many of the bunches of Black Hamburgh weighing 4 lbs., and the berries are large and the bunches compact. White Frontignan also is doing well under the same treatment, and the bunches are fine. Against the back wall of the conservatory the Guava is fruiting well, and a large Desfontainia is in glorious bloom. Passing from these houses to the kitchen garden, we came across a very telling riband the whole length of the kitchen garden, planted with Blue bedding Cliveden Pansy in front, Variegated Alyssum, Scarlet Geranium, yellow Calceolaria, Perilla, backed up by *Gladiolus Brenchleyensis*, and the wall covered with climbing Roses.

In the kitchen garden on a heated wall facing the south-west are some very fine Apricots, fully 8½ inches in circumference, unusually large for this cold district. Princess Royal Pea is prized here for its productiveness and dwarf habit, and Beck's Dwarf Green Gem Bean is a most productive and rich-flavoured little sort, exactly suited to a gentle-

man's table. The Chusan Marrow, a new kind introduced this year, is bearing here. It is much more shrubby in habit than any other, is of a striped green colour, of the same shape as the old kinds, and bears freely, the plant not occupying so much ground; it is as delicious as the Custard Marrow. Melville's Variegated Kale is also grown here, and in large shrubberies is a highly ornamental plant. Tom Thumb Lettuce is a firm and very small Cabbage Lettuce, not at all coarse for salads; and Wilson's Prolific Cucumber is a most abundant bearer and just the sort for amateurs. Mr. Ascoug speaks very highly of Dean's Early Prolific Potato, a small-haulmed kind, only five or six days later than the Ashtop, of medium size, but a wonderful cropper and of excellent flavour. Some good-sized bush Apple trees which had been in an unhealthy and unfruitful state were lifted a year ago, last autumn, and replanted in good soil, and they are now in full health and loaded with fruit. Amongst little-known Apples, New Hawthornden, a fine baking sort, and Betty Geeson, a large kitchen Apple, seem to be very productive on small trees.

A block of vineries and Peach-houses is at the back of the kitchen garden. In one of these, a span-roofed Paxton-house, with the soil largely made up of lime rubbish and stones, there are some fine Peaches, Grapes, and an enormous crop of Figs. Several kinds of Grapes are grown here, and the following remarks supplied by Mr. Ascoug, will give his experience of these kinds in one of the coldest districts in Yorkshire:—

"CHASSERAS ROYAL.—Bunches shouldered. Berries round and of a nice medium size, yellowish white when ripe, and apt to crack when ripening. A great bearer and a strong grower. Ripens a little earlier than the Black Hamburgh, and is well adapted for pot culture.

"CHASSERAS VIBERT.—Bunches medium-sized. Berries large, round, when well ripened of a pale amber colour; flesh juicy and sweet. A strong-growing variety and a great bearer. It is a good pot Vine.

"LADY DOWNES' is one of the best late Grapes. Bunches large, and the berries of a good size, and hanging a long time without shrivelling. It is a free grower and good bearer.

"GEOS MAROC.—Bunches large and compact, with shoulders. Berries very large and long, tapering a little both ways; when ripe of a dark reddish purple colour, and covered with bloom. This is an excellent Grape, and will ripen with Black Hamburgh; but it requires a good heat when in flower to set its fruit well. It is well worth growing.

"WHITE FRONTIGNAN is fruiting here well, and is one of the best white Grapes in cultivation when well grown. I think it should be more cultivated than it is, for there is none surpassing it in flavour. Bunches long. Berries medium-sized and round, when thoroughly ripe greenish yellow or amber; flesh firm, juicy, very rich, with a fine Muscat flavour. This forces well either in pots or planted out, and will ripen with the Black Hamburgh. It is an abundant bearer, but requires a good bottom heat to ripen it to perfection.

"MUSCAT OF ALEXANDRIA.—This is a good Grape, but it requires good treatment to grow it to perfection. Bunches very large and oval, with a fine Muscat flavour.

"MUSCAT OTTONEL.—Bunches very small but well set. Berries small, skin thick; flesh tender, but not plentiful, having a very strong Muscat flavour. It is an early Grape, will ripen a fortnight before Black Hamburgh, is an abundant bearer, and fruits well in pots. We think it is not worth growing for anything but flavour, the berries are so small.

"MUSCAT ST. LAURENT.—Bunches and berries similar to those of Muscat Ottonel; flesh tender and juicy, with a strong Muscat flavour; colour pale amber when well ripened. An abundant bearer in pots. It ripens with Muscat Ottonel. The foliage of Muscat St. Laurent is much more indented than that of Muscat Ottonel, which constitutes the only difference we can perceive in the two. [The berries should be roundish oval.]

"MUSCAT HAMBURGH.—This fine Grape is growing on its own roots here in an inside border, and is carrying some fine bunches.

"PURPLE CONSTANTIA.—Bunches long and tapering, with

small shoulders. Berries medium-sized, dark purple, covered with bloom; flesh juicy and well flavoured. This Grape is well worth cultivating, it being a free grower and a good bearer.

"BLACK FRONTIGNAN.—This is a free-growing Vine and a good bearer. Bunches medium-sized and cylindrical-shaped, some having shoulders and some none. Berries round and unequal in size, but generally of a medium size, and of fine flavour.

"GOLDEN HAMBURG is carrying some fine bunches, but I find it a shy bearer, though an excellent Grape, rich and sugary when well grown.

"We also have Buckland Sweetwater, which is a good Grape, and Royal Muscadine and Trentham Black are doing well."

VISITING SOME DISTANT GARDENS, AND HOW TO SEE THEM.

THE language of poetry, like that of the abstract sciences, would seem to require revision now and then, when new ideas or improved systems render old-established expressions erroneous. The flowery month of May, which has been sung by poets for many centuries, is now almost superseded by August, which long ago reigned only over ripening fruits and harvests of golden grain; for the flowering plants by which the parterre of the present day is embellished put on their gayest apparel during this month. Go where we may, masses of scarlet Geraniums, Lobelias, Calceolarias, Verbenas, &c., meet the eye; and though some critics may question the propriety of sacrificing so much for this display, there is no question as to its gorgeous character. August, then, being so essentially a month for gay flowers, let us take a hasty glance at the principal features of this month's embellishment, and endeavour to find out in which way the improved practice of one district may be imported into another.

As flowers in August have become so numerous, and as beds planted with the most popular plants are then in full beauty, it is incumbent on their ardent admirers to visit places within reach where the greatest perfection in the floral department of gardening is attained. There are comparatively few places of note at which bedding plants are not numbered by thousands; in fact such plants have in a great measure superseded other and more legitimate occupants of glass houses in the winter, and in spring every corner under cover is filled with them, so that the gay appearance which they present in August is not produced without a due share of trouble and expense at other seasons. Let us now try to discover how the greatest amount of information on this department of gardening can be obtained, and endeavour to induce our readers who may visit remarkable places to point out what is worthy of notice, and as several gardens of great importance are open to the public at this season, and those that are not so are often, nevertheless, accessible to gardeners of standing, it follows that there are many opportunities of noticing what is going on in the ornamental department of the gardening art. In the first place, I would suggest to all employers who wish to keep pace with the times the expediency of making arrangements for their gardeners visiting one or two of the metropolitan or other good horticultural shows during the summer, and to induce them in August to devote a few days to some tour, near or distant, where the best examples of gardening in its different branches may be brought before them. Railways offer great facilities for undertaking long journeys at a reasonable rate, while the journey itself is not always lost on the observing and reflective traveller; different modes of cultivation, and a variety of crops being presented to his view, in addition to the equally important natural features of soil and climate. Indeed, a railway journey may be as instructive as a visit sometimes is, if the traveller keep his eyes open, and compare the appearance of the things he sees in his journey with those he left at home.

It would be premature in a paper like this to point out any particular routes to the intending tourist. I would, however, advise him to make himself as well acquainted as possible with the neighbourhood he is about to visit before he starts, and to arrange his plans beforehand; for though

local circumstances may compel him to depart in some measure from it, still the general route which he intends to take, and the places he may regard as his head quarters for the time, ought to be as much as possible adhered to. The "Gardeners' Year Book" contains a list of the most important gardens in the kingdom, and the names of the railway stations from which they can be the most conveniently reached; and I should recommend all intending to visit gardens to possess themselves of a copy previous to starting. By it they will find that by making an important town—say Leeds or Liverpool, their head quarters for a night or two, some important gardens may be seen, and there are, doubtless, many places well worth seeing which have not yet appeared in the list above alluded to. The tourist may, in some cases, be guided by the information he obtains in the neighbourhood, or, perhaps, some experienced person will point out what places of importance may be conveniently reached from certain points, which for distinction we may call bases.

Although my knowledge is far from being perfect, the names of a few places within easy access of Liverpool by rail, may, perhaps, be of service to the general reader. At the same time I must observe, that as it is now some years since I visited some of the places mentioned, it is possible that greater restrictions may be made as regards visiting some of these places.

Assuming, then, that a tourist anxious to see all that he can in the gardening way, should arrive at Liverpool late in the evening, his first, and, probably, only duty for that night is to secure comfortable lodgings. Unfortunately, I am not in a position to inform him how to act in that matter, further than saying that the inferior class of inns in Liverpool are by no means either the cheapest or most comfortable.

Quarters having been obtained—say near the centre of the town, let the traveller make arrangements for starting early; and presuming him to be determined to see all he can in a limited time, he might rise as early as 5 A.M., and if a stranger he might take a stroll in the town till 6 o'clock, when he might make his way to the Botanic Garden, which is at the north side of the town. This garden when I visited it last year was second to none I met with in a wide circle round, for the good keeping and variety of its floral display. I may state that the character of the garden was such, that scope was given for plants not usually met with being employed for bedding purposes. The contents of the glass houses are, however, for reasons that need not be explained, not accessible to the public until a later hour; but there is enough outside to interest the looker-on for a couple of hours.

After breakfast he may start again for a short stroll towards the great centre of attraction—the Exchange, near which is the fruit and vegetable market, which is well worth inspection; but he must not delay long, for he will have to visit Chester, and the princely seat of the Marquis of Westminster near that ancient city.

Crossing the water to Birkenhead in one of the boats, a pleasant railway journey of twenty miles will bring him to Chester. I would not advise the traveller to spend any time in looking over the antiquities of this old historical city at present, but to push on to Eaton Hall, the seat of the Marquis, which is about three miles off; and if he walk and take the shortest route he will pass through some pleasant meadows by the side of the apparently deep and noble river Dee. At Eaton Hall he will see one of the happiest examples of an embroidered flower garden intermingled with beds for bedding plants, the whole being on a scale befitting the richly decorated character of the mansion, which exhibits to the fullest extent the varied embellishments of which gothic architecture is susceptible. The kitchen garden and forcing-houses are also in character with the magnificence of the place, while the surrounding shrubberies offer examples of Conifers, and other remarkable objects. I will now leave the visitor to make his way back to Chester, and if young and active most likely he will be inclined to take a circuit round the city walls, which are in excellent condition. The Rows, as they are called, or what a stranger would term the principal or High Street, must also be inspected, and the quaint features of a bygone age will be observed.

Supposing him to return to Liverpool the same night, there is plenty to see in the neighbourhood of that town for

another day or two. In the first place, I would advise him to visit the extensive Graperies of Mr. Meredith, of Garston, which is some four or five miles from Liverpool, but I believe now united to it by rail. There, amongst a number of other houses devoted almost exclusively to the cultivation of the Vine, are two span-roofed structures, each 144 feet long by about 39 feet wide. These had been but recently planted when I saw them, but others which were in full bearing showed unmistakably that fruit as fine as Mr. Meredith sends to the metropolitan exhibitions could be sent to every show in the kingdom, the quantity being so large, and the quality so good. To the aspirant for honours in Grape-growing, a visit to Mr. Meredith's place cannot possibly be otherwise than highly interesting.

Eastward from Liverpool some ten miles, more or less, is Knowsley, the princely seat of Lord Derby, which is also a celebrated place for fruit-growing; Peaches in particular do remarkably well there. I remember some years ago being struck with the healthy appearance the trees had on a Peach wall of great length, and 15 or 16 feet high, there being scarcely a square foot from bottom to top that was not covered with healthy, fine, bearing wood, and loaded with fruit, which in fine seasons I should venture to say arrived at a degree of excellence unknown in those grown under glass. In dull, adverse seasons, perhaps, this might not be the case, but from the healthy, fine, bearing condition of the whole it was evident that in general all went on well. There are, besides, many other gardens of note near Liverpool; but I confine my observations to those which I have visited, and in the absence of accurate knowledge of the others must ask the tourist to again take the rail northward, and near Wigan is Haigh Hall, the seat of the Earl of Crawford and Balcaras, a place possessing many fine features, the abundance of coal in the neighbourhood favouring forcing of all kinds. Beyond Haigh Hall, however, the country becomes less inviting, although as a coal country it has not the desolate appearance of some districts in South Staffordshire. Near Ormskirk is also the seat of Lord Skelmersdale, Latham House, a noble mansion of the early part of the last century, embowered amongst trees and scenery which neither railways nor manufactories have yet invaded. I should, however, when at Knowsley, and consequently on the line of one of the first passenger railways made in England, have conveyed the visitor to Worsley, some ten miles still nearer Manchester, the seat of the Earl of Ellesmere. The mansion is beautifully situated on an eminence, has a superb flower garden in the embroidered style on its south side, with terraces, slopes, and other fitting appendages, surrounded with extensive grounds of a less formal character. As we are approaching Manchester, which might with as great a claim as Liverpool become the centre of a district full of gardening attraction, I must take leave of the tourist at the latter place, so far as personal acquaintance with gardens of importance is concerned, and refer him to some other guide. I am told that Lord Sefton's garden is fine, and that there are several others in the suburbs of Liverpool, all deserving of attention.

Assuming the traveller to prefer a midland instead of a north-western route, if he were to make Derby his headquarters, he might from this place very conveniently visit Elvaston Castle, the seat of the Earl of Harrington, and there see the extensive collection of Conifers with the long avenue, as well as the curved and formal line of shrubs and trees cut into every fanciful shape. It would, however, be advisable to make sure that Elvaston was open to visitors before venturing so far, as in years gone by it was closed against the public. It has, however, lost much of its importance since the public have had more chances of visiting it; and the Japanese or Chinese taste, which it exemplifies in its formal and often quaintly-cut shrubs and trees, has not taken well with the English public: nevertheless, it is well worth a visit. Borrowash, half a dozen miles or so from Derby, is a station very handy to it. The neighbourhood is flat and uninteresting, and all the eminences are artificial; even the water is artificially formed. On the opposite side of Derby, and at double the distance of the last-named place, is Chatsworth, which is reached by rail. I need not descant on this fine place further than to say that it will well reward the visitor. There are also, I am told, some other fine places in the neighbourhood.

Conducting the tourist back again to Derby, I must ask him to extend his journey on the North Staffordshire Railway to Alton Towers, a station of that name being close to that celebrated place. Here he will see levels and formality disregarded, and rugged mountain scenery blended with the softening touch of dressed ground, and the whole on a magnificent scale. From Alton Towers he might proceed to another centre of inspection further westward, where he could reach Trentham, which is on a loop of the same line of railway. He might, after that, make his way to Manchester if he liked, and the places of importance within easy reach of that city are too numerous to be mentioned here.

As I have already extended this article to such a length, I must leave the other places of note that are within easy distances of each other until a more fitting opportunity, advising, at the same time, the intending tourist to make himself still further acquainted with the places he purposes to visit ere he start, and, if possible, to ascertain if the place be open to visitors. Generally speaking, gardeners from a distance are admitted when the general public would be refused, but it is better in all cases to insure this before an unpleasant disappointment occurs; for, although it may seem harsh to turn a visitor away from the gates, the privacy of the owner ought to be the first object of consideration. The extreme liberality of some noble proprietors of mansions and gardens in throwing them open to the public on certain occasions ought to entitle them to more undisturbed privacy at other times; while those opposed to the admission of large bodies of visitors into their grounds, have, nevertheless, no doubt good reasons for being so. A note beforehand from a gardener of standing will often pave the way to an easy admission, and very often bring about an agreeable introduction.—J. ROBINSON.

ORCHARD-HOUSES.

HAVING been much interested by reading the discussion on this subject in your Journal, I determined to see the orchard-houses of Mr. Rivers and Mr. Pearson, and must say they exceeded my expectations, and I am quite convinced their usefulness is an established fact. Having read so much about the difficulty of growing Apricots in houses, imagine my surprise at seeing, at Mr. Rivers's, scores of large trees literally covered with Apricots—and such Apricots! bright golden fruit, no Oranges could be more beautiful, and as to the taste, my mouth waters at the recollection, I had no idea they could be so improved. Some of the Peach trees at Chilwell are most beautiful, perfect cones, 7 or 8 feet in height, with leaves longer than my hand.

One thing struck me much at both places—there was plenty of fruit, luxuriant foliage, and hardly a trace of red spider to be seen, the trees being of large size, many of them seven to ten years in pots. There does not appear to be any great difference in their management at the two places; Mr. Pearson has built very handsome houses, those of Mr. Rivers are of a cheaper description, but the trees are all that could be wished. It appears to me that care in watering, and liberal feeding, are the great secrets of success. The under side of the foliage was syringed twice a-day, the soil, when requiring water, being well soaked to the bottom of the pots. Each pot was covered a couple of inches with a mixture of horse-droppings and malt dust, this Mr. Pearson called Mr. Rivers's mixture, and he said it was superior to the manure water he recommends in his own book, and from what I saw I have no doubt of its value; it never stops the water, the dark foliage of the trees shows how it is enjoyed by Peaches, and wherever it has been applied to Vines strong white roots have run through it in all directions.

Last, not least, much was said about stopping the shoots. Up to the end of July every shoot, particularly on the upper part of the trees, was stopped, so that the trees are full of short stiff branches. This I feel sure is the main point in Apricot culture, as the crop appeared in exact proportion to the sturdy nature of the shoots; long thin branches either drop their fruit or it is small and poor.

Those who visit these establishments will see by the large number of trees cultivated for sale that the orchard-house is not looked upon as a mere fashion of the day, my own impression is that it is only in its infancy. The great reason

the system has not made more progress is the want of men who understand it, at least so it appears to me. Men of little education require to see a thing done to be able to do it afterwards, and without practice and experience make poor gardeners and farmers, and even the best-read man who is quite up in theory, generally pays at first for his want of practice.

Another thing struck me very much during my pleasant visit to these places, and that was, that the fruitfulness of the trees appeared to be greatly increased by age. From what I saw I should not expect much from young trees, nor should I fear them dying or being worn out by age, the oldest trees were in every respect the best.—A. B.

CUCUMBER DISEASE.

A CORRESPONDENT sends the following as a remedy; and we append Mr. Fish's remarks, which will prove interesting to our readers:—"A red-hot brick placed in a Cucumber-frame, and sprinkled over with sulphur and water, produces a vapour which destroys the disease. This remedy has often been tried by an experienced gardener with the greatest success."

[Your remedy—a red-hot brick sprinkled over with sulphur and water—whatever effect it had on the disease, would, we think, be fatal to every leaf that came under its influence. In a large lofty house, and where the fumes and vapour would be pretty well dispersed before reaching the foliage, the danger might be lessened; but it is a cure we would not like to try unless where cure or kill was a matter of but little moment. A sulphurous atmosphere has little effect in curing the diseases of the Cucumber with which we are acquainted, and we are left in doubt what your disease is.

If mildew were the evil the sulphurous vapour would do some good; but then that would be best applied by painting the walls exposed to the sun with sulphur, or sulphur and soft soap, or in heating a metal vessel to 150°, and then painting the outside with sulphur; or, better still, painting the outside first, placing sulphur in the shape of thick paste in the vessel, and then adding water of the temperature stated above. Every bit of sulphur that touches a red-hot brick carries destruction to everything having vegetable life that the vapour reaches. It would be less dangerous in a large place, because the vapour would be more dispersed and cooled before reaching the foliage. We say decidedly that our practice in this respect is thoroughly opposed to that of the experienced gardener. We, too, have burned sulphur in pits and houses, but it was after the leaves were all fallen from deciduous plants, as the Vine, and the wood was too firm and hard to be injured. We would never think for a moment of exposing an evergreen or a growing plant to such an influence. We know myriads of cases of ruin thus produced. Some years ago one of the best old practical gardeners of the day destroyed numbers of plants in a conservatory by giving them sulphur vapour too hot. He tried tobacco on insects; and as it did not act quickly enough in destroying the numerous shoals of successive broods on some Cinerarias, he put a bit of sulphur along with the tobacco, and as long as he lived he used every now and then to blame his carelessness and want of consideration, and all the more because many years before he knew all about what burning sulphur would do. We have hesitated even to recommend mixing sulphur with quicklime and water in a close atmosphere for this purpose, for fear that the sulphur would be too much heated, and because the lime from limestone will give out so much more heat than the lime formed by burning chalk. For mildew the sulphur may be spread, or rather dusted fine, on the foliage, and the labour may be lessened by removing all the foliage most affected. When leaves are pretty well dusted over with mildew it is waste labour to attempt to restore them. It should be treated as soon as the first trace appears; but, as stated above, for the diseases of gummy excretion, or brown spot on the leaf, we have found no remedy in sulphur. For these, as stated in "Doings of the Last Week," the only remedies hitherto found are fresh air, not too high a temperature, fresh soil, and repeated planting with young healthy plants. Some of the once

most successful growers of the day, and for a quarter of a century past at least, know not the cause of the disease, and know as little how to conquer it. Whenever it appears fresh planting is the great remedy.]

FIG TREE THROWING ITS FRUIT.

"A LADY" has a Fig tree which has been planted in her garden for about fifteen or sixteen years, and for the last few years all the young Figs have fallen off, with, perhaps, one or two exceptions. Imagining that this might be caused by a draught of cold wind, to which it was exposed, her gardener, last year, trained it, without removing it, under a projecting roof, and upon a wall in an unexceptionable situation, where it was exposed to the south and to the west. As it had been necessarily much cut-in, nothing was expected of it last season. This year it produced a very fair proportion of Figs, but many have already fallen off, some having nearly attained their full size; and all the rest will no doubt fall off also, as they are turning yellow. The lady regrets that she cannot remember the name of the Fig. Its fruit is large and brown, and it was considered a first-rate kind.

[The Brown Turkey, or Lee's Perpetual, is one of the best of Figs for bearing freely. We question, however, if this be the kind you have, as the fruit is not so very large. Your description would, perhaps, apply better to the Brunswick, a good Fig, but not such a free bearer as the Brown Turkey. We are left in a little doubt as to the cause of the fruit falling off, because you do not say whether the wood of the tree is extra luxuriant, or rather somewhat stunted. In the former case extra luxuriance will sometimes cause the fruit to fall; and the best temporary palliative for this is ringing the shoots below the fruit, slipping out about the twelfth-of-an-inch ring all round the shoot, which will soon fill up. The object is to lessen extra luxuriance, and keep the elaborated sap more in the vicinity of the fruit. The most effectual remedy is to lift, replant, or root-prune in autumn, drain, keep dryish in winter, and give plenty of water after the fruit appears. If your tree is not extra luxuriant, the dropping of the fruit for successive years leads us to the opposite conclusion—that the fruit drops for want of sufficient moisture at the roots.

Figs grown in pots, if allowed to become dry at the roots when the fruit is swelling, are almost sure to drop more or less, and after each such case of dryness. We have known Fig trees, moderately luxuriant, out of doors, drop their fruit from over-dryness at the roots. When the fruit is swelling they will drink almost like an aquatic, but the moisture must not be stagnant.

Were we to plant Fig trees out of doors, we would secure good drainage; a bottom for the border, through which the roots would not penetrate, or be tempted to go—some 6 or 8 inches of open rubble all over, then a depth of from 12 to 15 inches of strong loamy soil, and a width of border of from 3 to 4 feet, beyond which the roots should not be able to go. Here the wood would grow robust and be well ripened, and water could be given in summer without any danger of stagnant moisture. Some years ago we described a large Fig tree, most of it possessing short stunted shoots bristling with fruit as closely as they could be, the nodes being so close to each other. One part of the tree produced luxuriant wood but little fruit, and on a close examination we found the large limbs of the productive part had the bark all gnawed near their base with mice. In fresh planting we would wish to attain the same beneficial result without having to resort to ringing, root-pruning, or the nibbling of the mice.

Without some such precautions as to the state of the roots and moisture, the Fig tree will often be an uncertain bearer out of doors. We have two trees that generally bear well. This season the fruit is dropping a little, owing to dryness at the roots and to a luxuriance produced by the roots going deeper than they ought to do. We cannot do anything to them without much labour; and as we have plenty of others we do not set great value on them, and generally get as much fruit as we want. We neutralise the luxuriance by keeping the shoots well sunned in summer, and not too many of them. In a neighbouring place a gen-

tileman was celebrated for Figs growing against the sunny side of his stables. He allowed no one to touch them but himself, and they scarcely ever saw knife, or shred, or nail, the branches hanging somewhat from the wall; but the roots had little to grow in, and the wood, therefore, was short, and plump, and stubby, and the plants did moderately well.—R. F.]

TURF SOIL.

THERE are few requisites for a garden so troublesome to procure as turf soil, unless a man has an estate of his own, and even where there is plenty of grass land the gardener is not always permitted to cut turf. I know that the want of this supposed essential material is severely felt by many persons. There can be no doubt that the man who can procure soil of various qualities, light sandy turf, turf from a loamy pasture, and turf from a rich strong clay, who has ready to his hand a good heap of peat, another of decayed leaves, and a quantity of cocoa-nut fibre, has a great advantage over a man who with difficulty prepares a compost, or procures a soil for his trees. I would not for a moment produce the impression that it is a matter of minor importance to have good soils ready at hand, but where the thing we want cannot be had, a good substitute is a desideratum.

Having heard of Mr. Garsides's man, at Worksop, being very successful as a grower and exhibitor of fruit, I went to see his practice. Pines, Grapes, and plants, were all well grown, indeed it is not often they are seen in better condition, and yet not a particle of turf soil is used in the garden. The gardener told me turf was very difficult to procure, and he asked himself whether it was necessary. "What are the advantages of turf? It is fresh soil to the plants I want to grow: so is any soil which has not grown those plants before. It is full of grass roots, and less compact than ordinary soil: this mechanical condition ought to be easily imitated. It is full of vegetable matter—that can be easily supplied."

The result of this was, he had a quantity of fresh stable litter, just as it left the horses, chopped up and mixed with garden soil, and in this every plant and tree, except such as require peat soil, was growing luxuriantly.—J. R. PEARSON, *Chilwell*.

TODMORDEN BOTANICAL SOCIETY.

MEETING, AUGUST 1st, 1864.—E. Binns, Esq., in the chair. Mr. S. King, of Lanehouse, Luddenden-Foot, was elected an associate member. Mr. J. Law exhibited fronds of beautiful varieties of the Lady Fern, gathered during the past month in Langfield. One of them is regarded as quite a new form, and is proposed to be named *Athyrium filix-femina brevipinnulum*, all the pinnules, except the basal, being rounded and shortened very remarkably. Another filical novelty was reported in the hands of the members—*Athyrium filix-femina curtum*, from Windermere.

Letters were read from the North Devon excursion party, with accounts of their progress, and a long list of rare plants already found. A long and highly interesting communication was also read from Mr. W. Hobson, of Philadelphia, an associate of the Society. Mr. Hobson gives in a journal form, an account of a botanical tour made by him through some portions of Pennsylvania during June and July last. His success was very considerable, as will be seen by the list of plants given below. Mr. Hobson, describes the heat as having been quite unusual, the thermometer having indicated 100° in the shade for three consecutive days. Among the plants collected by Mr. Hobson, were the rare *Polypodium incanum*, the rare, highly-curious, and very minute *Schizaea pusilla* (in considerable quantity), *Pteris* (*Platyloma*) *atropurpurea*, so much prized of Fern-lovers, and so seldom found in collections (many scores of plants), the lively *Cheilanthes* (*Nothochlæna*) *vestita* (in quantity), *Botrychium limparioides* (*fumarioides*), *B. obliquum*, and *B. virginicum*, *Asplenium angustifolium*, *Lycopodium inundatum* (var. *Bigelovii*), *Lycopodium rupestre*, *L. complanatum*, &c.; among *Phænogams*, *Anemone thalictrifolia* (in quantity) *Arum triphyllum*, *Chimaphila maculata*, *C. corymbosa*, *Drosera filiformis*, *Hypoxis erecta*, *Sarracenia purpurea*, *Orchis spectabilis*, several species of *Cypripedium*,

six species of *Viola*, including *V. lanceolata*, and *V. sagittata*, *Goodyera pubescens*, &c. It is expected that at the next meeting of the Society Mr. Hobson will attend, to report his experiences in person.

The Honorary Secretary announced the recent discovery in North Wales by Mr. Bruce Findley (Botanic Gardens, Manchester), of an immense number of plants of *Asplenium trichomanes ramosum*, many of them very closely approaching *A. t. cristatum*, and several rare varieties of *Blechnum spicant*. Mr. Findley may be congratulated on his good fortune. A box of North American fossils, the gift to the Society of Mr. F. Hartley, Alton, Illinois, was announced as on its way, by favour of Mr. Hobson.

CULTIVATION OF THE MELON.

(Continued from page 110.)

A PIT without means of lining, or applying heat after planting, is represented in fig. 4. In this case the pit is

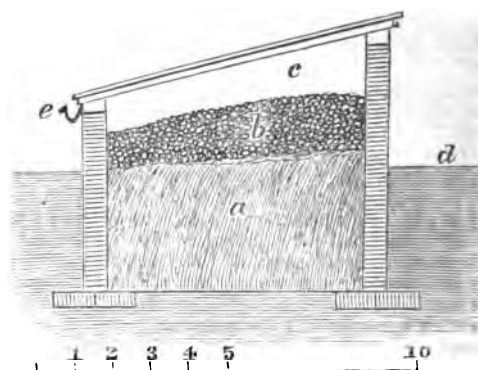


Fig. 4.

filled quite up to the rafters with prepared fermenting materials beaten well down, and trodden firmly, so as to prevent the material of which the bed is composed falling too low, and causing the plants to be at too great a distance from the light. Such pits are very useful in winter and spring for Endive, Lettuce, early Potatoes, &c., and a crop of Melons may be had after these, by planting strong plants in May, or at the latest by the beginning of June. The fermenting materials give the plants a start, and sun heat carefully husbanded must be made to do the rest of the work. The bed is soiled, and otherwise treated as described for fig. 3.

The figure shows the state of the pit about a month after planting; *a* is the bed of fermenting materials; *b*, soil over it; *c*, open space for the plants to grow in; *d*, the ground level; and *e*, the spout to carry off the rain water, which may be collected in an old barrel sunk in the ground.

The lined-pit represented in fig. 5, is chiefly employed for growing late Melons, and when not in use for that purpose is utilised in a variety of ways. There is a space for a hotbed (*a*) to be formed of dung, leaves, or other fermenting

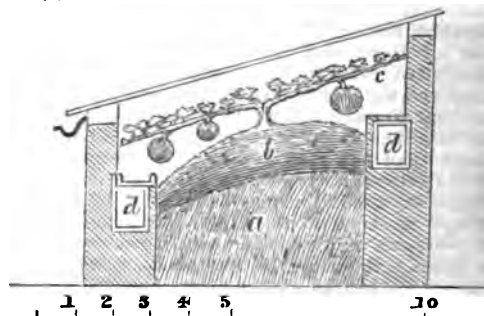


Fig. 5.

materials; *b*, shows the soil above it. There are sometimes moveable trellises for training the plants on, as at *c*, *d*, *d*,

are fires, the hot air passing along one end and the front first, and then along the back. Melons to afford a late crop may be planted as late as the beginning of July, and if they set their fruit in August they may be ripened by fire heat, no more of that being employed than is necessary. In this way Melons of moderate flavour are obtained in October, and up to Christmas, but not equal to those ripened in summer, when there is a longer continuance and greater intensity of light and sun heat.

Fig. 6 is what may be termed an open pit, being nothing more than earth dug out a yard deep, and a single brick wall, *a o*, run round the outside; *b* consists of wood faggots

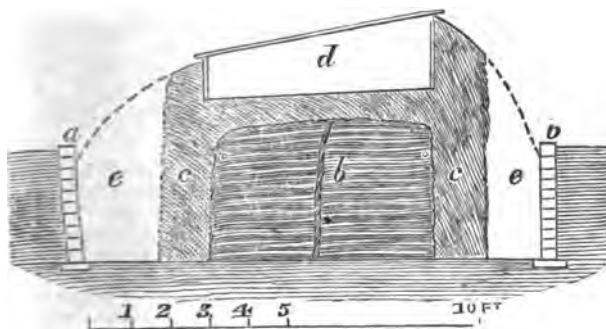


Fig. 6.

piled up to a height of 3 feet, and round them hot dung, leaves, or other fermenting materials are placed at *c c*, pressed firmly, and carried up to a height of 5 feet, so that the dung may be 2 feet higher than the wood faggots, and partly at the sides, and partly above them, as in the figure, only the bed there shown a foot too low, in order to represent the appearance when the frame is put on. *d* is an ordinary garden frame placed upon the bed thus made.

By this system the violent heating at first of a dung-bed is obviated, and a saving of material effected; by filling the open spaces, *e e* (first the front, and in ten days or so afterwards the back of the frame), with grass mowings, weeds, or old rubbish of any kind, additional heat is obtained, and it readily passes among the faggots *b*. When it becomes necessary to have a renewal of heat, it is only necessary to turn over *e* and *c*, moistening them if dry, and adding a little fresh material if at hand. In a week or ten days the opposite lining may be served in a like manner. The utility of a pit of this kind will be apparent, for it not only presents a place for rubbish, but is a means of turning its decomposition to advantage, whilst its value as a manure is much enhanced by the process.—G. ABBEY.

(To be continued.)

COOLING WATER IN HOT WEATHER.

It may seem needless to ask for scientific means for making and keeping water cool, just when the late fall of rain will probably bring a cooler atmosphere naturally. Nevertheless, I apply to you to know whether there is not some comparatively easy way of causing a bottle of water to become almost iced by evaporation. If so, why can I not succeed? I have tried the red porous earthenware jugs, but they give a disagreeable taste to the water; then a machine something like a hat, but the butter seemed nearly as liquid when taken out as when put in. Lately, I tried hanging a glass bottle in the sun in a thorough draught with a wet worsted stocking drawn over it, and even during the late hot weather we have had plenty of wind near the river where I live, but the water was little if at all cooler in consequence.

I have long been convinced that a fortune might be made by some person ingenious enough to make a simple, inexpensive, and not bulky machine for storing ice. Ordinary refrigerators cost £4, and take up far too much room for small houses.

Wenham ice may be cheap enough in London, but in my neighbourhood it can only be had at a cost of 3d. or 4d. daily, and then only for one meal, as there are no means of

keeping it between meals, besides the troublesome necessity of ordering it beforehand. And yet what a comfort it would be to invalids, and, indeed, to everybody to have cold things to eat and drink in summer!

We have a sort of out-house room which has been condemned as too damp for any one to sleep in, and the floor is taken up. Could not this be turned into an ice or snow-house by draining away the meltings? It is rather below the surface of the ground, but has two cross windows, east and north, and a chimney, so it ought not to be damp. Can you help me either for the future or for the present?—H. H. Y.

[We heartily wish some of our scientific readers would try and help our correspondent and oblige us at the same time. Personally we know little more of the matter than was stated in a late republished article on ice-houses, &c. A thick deal box with a secure lid would keep ice a considerable time, and these any carpenter might make to order. Our whole experience as to cooling water inside of bottles, glassware and earthenware, is opposed to the results you have found. We one time had a sort of passion for cool water in summer. We had the water from a running brook, put it into common wine-bottles, pulled a woollen stocking over them, and suspended them full in the sun, with a large pail fixed above them from which two pieces of wool list depended over each stocking, just preventing the stocking getting dry. Had we not stopped this pleasant practice of quaffing large quantities of this cooled water, we should not have been alive to write these notes. We got in a bad way, and a friendly doctor told us that these cooling draughts taken too frequently give a terrible check to the circulation of some persons, and we believe from our own experience that he was perfectly right.]

We know no reason why you should not turn your spare outhouse into an ice-house or snow-house, but we do not think you will succeed unless you do away with the windows, obtain a double door, and either have a double wall and roof, or cover the whole outside with a coating of a foot of straw neatly laid on. Then with drainage we believe the ice would keep as well in an outhouse as in an ice-well or ice-house. In fact, in the late article, an ice-house is described as wholly above ground. Your outhouse would be of little use if the sun shone, or the wind played on a common roof, or a common wall, and, of course, the windows would soon settle all.]

BELFAST ROYAL BOTANIC GARDENS.—At a very numerous meeting of the Directors on Wednesday, the 3rd inst., Mr. William Hooker Ferguson was appointed Curator, as successor to his late lamented father, who so long and worthily filled that situation. It is very much to the credit of Mr. William Hooker Ferguson, and speaks strongly for his abilities and pleasing disposition that the Directors were unanimous, and that the letters of recommendation and certificates read from Sir William Hooker, Mr. Smith (the late Curator of the Royal Gardens, Kew), &c., were highly satisfactory. A letter was read from one of the Directors, who had been waited on with a proposal that a deputation from the local nurserymen and gardeners should attend on the Directors to express a wish that Mr. Ferguson should be appointed. This is a strong evidence of the good feeling entertained towards him; and with every good supporter of the gardens the hope is strong that under his management and with increased finances they will go on and prosper.

WORK FOR THE WEEK.

KITCHEN GARDEN.

CONTINUE to plant out winter and spring vegetables wherever there is room. *Cabbages*, another sowing of the different kinds may be made for spring planting, and like wise of hardy *Cos* and *Cabbage Lettuces*, selecting a similar spot for the seed-beds as recommended for *Cauliflowers*. *Cauliflowers*, towards the end of the week the principal spring crop of *Cauliflowers* and *Walcheren Broccoli* should be sown. Sow thinly in an open place and not on too rich a soil, or the plants will become gross and less capable of standing the winter. *Endive*, plant out: where the ground is wet this crop should be planted on raised slopes facing the south,

to prevent damping in wet weather. This really valuable winter vegetable should find its way into every garden for culinary use, independent of its value as a salad plant. *Onions*, pull them up directly they show indications of ripening, and expose the bulbs to the sun to ripen them. *Parsley*, thin out and cut down a portion of the spring-sown, that a fresh growth may be made before the winter. A portion of the thinnings should be potted in twelve-inch pots for removing to frames in the winter. *Radish*, sow succession crops of the white and red Turnip Radish. *Shallots*, take up, and also Garlic for drying. As soon as a sufficient quantity of droppings is ready, proceed to make a bed for Mushrooms.

FRUIT GARDEN.

The present is one of the most important periods of the whole year as to giving due attention to fruit trees. The autumn will soon approach, the solar light becomes much diminished, and the soil will be perhaps saturated by the autumn rains: it will then be too late to talk of the benefits of light to trained fruit trees. All tender fruit trees which are trained will now be benefited by stopping the growing shoots. Any amount of control may be exercised over the roots by such means. Of what use is the excitement of so late a root-action as we frequently see encouraged by means of enriched soils and the neglect of stopping? In looking over Peaches and Nectarines it will be found that many of the shoots which were deemed necessary and nailed in for succeeding crops will begin to overlap each other; many of these are stopped at this period. Pears, too, whatever superfluous shoots may have been retained, with the idea of preventing the blossom of next year from breaking, should now be well shortened back sufficiently to admit the sun's rays with freedom. The stumps cut back (each carrying three or four efficient leaves), will assist in producing elaborated matter both to feed the fruit and to invigorate the embryo blossom-buds, now actively engaged in depositing food for a healthy development in the ensuing spring.

FLOWER GARDEN.

Hollyhocks, Dahlias, and herbaceous plants must be made safe from the effects of high winds by securely fastening them to their supports. The like attention should be paid to climbing plants against walls and trellises, standard Roses, &c. There is an appearance of negligence when plants are seen blown about by the wind, which should by all means be avoided. Remove daily dead leaves, withered blooms, and litter, and frequently sweep and mow grass, that a clean and well-kept appearance may be preserved. The general pruning of evergreen shrubs should now take place, reducing straggling growth within proper bounds, but avoid giving them anything of a formal character; the object is to assist not deform nature, and the general characteristics of each plant should be as much as possible preserved. The case is different in pruning shrubs used as architectural embellishments, which will require trimming into the precise figure wanted. At this season many florists divide and repot their Auriculas and Polyanthus, that both young and old plants may be established before winter. Avoid exciting composts, stimulants are only applied when the plants are growing. Take care that newly-planted beds of Pinks and Pansies do not suffer from drought.

GREENHOUSE AND CONSERVATORY.

The usual quantity for a season's supply of the soil used in potting, should be laid in as soon as possible, and before the ground is sodden with the autumn rains, for even turfy soil should not be carted and stacked up when saturated with water. The soil should be neatly put up in narrow ridges so as to be safe from wet, and it should be exposed as much as possible to the action of the air. As success in plant-growing very much depends upon having suitable soil for potting, no trouble or expense that may be necessary to procure this should be spared, when well-grown specimens are expected. Loam of moderately good quality may be obtained in most neighbourhoods; but good peat is not obtained in many localities. This is absolutely necessary, however, for the growth of choice hardwooded plants, and should be procured at the proper season, so as to have it in a fit state for use when wanted. Stove plants flowering in the conservatory will require attention to prevent their being injured by damp, especially Achimenes, and Clerodendrons, which should be gone over every day in cloudy

weather, carefully picking off decayed flowers, &c. Any of the twiners on the roof which have done flowering may be thinned out, so as to prevent shading the house too much, for after this season permanent shade should be avoided as much as possible. In mixed greenhouses look well after winter-flowering plants of a common character, such as Cinerarias, Verbenas, scarlet Pelargoniums, Heliotropes, Roses, &c. Cinerarias must now be potted off, whether from seed or from suckers; Chinese Primroses also, giving the last shift to those intended to bloom in November and December. Scarlet Pelargoniums to bloom well should be rather pot-bound.

STOVE.

Continue to top up the late growth of Orchids, and to keep the plants at the warm end of the house. Give air liberally in the early part of the day, and on very fine mornings syringe occasionally the whole of the stock. A little fire heat must be kept up, if only to insure a proper circulation of air.

COLD PITS.

Young stock intended to flower next season should be exposed to the midday sun, in order to ripen the wood, taking care not to do this so rashly as to injure the foliage. This, however, will only be proper in the case of such things as have already made plenty of young wood, but it is advisable after this season to anticipate the approach of winter, and to use every possible means to forward the growth of valuable hardwooded plants in order that it may be somewhat firm and able to resist damp.

W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

FOR calendar references of what should be done, we beg our readers to refer to Mr. Keane's judicious advice for the last, and no doubt also for the present week. We have little to say, because we have done nothing but help to keep things going on as they were, being but too glad if they were not going backward. On Tuesday morning and during the day we had a nice refreshing rain, which though it did not do much to moisten the earth, cleaned the foliage, and swelled out the stems. We should have liked more rain, as it scarcely told upon our reservoirs, but we were thankful for what did come. The whole appearance of vegetation was changed as if by magic. The birds sang with their sweetest notes, and the blackbirds and thrushes for some dozen or twenty hours, showed by their comparative absence that they could be independent of our fruit, and of ourselves likewise. Swallows that a few hours previously were soaring almost out of sight, actually came on the lawn to enjoy the damp herbage, and straddled across it in search of insects, much as a water wagtail would have done. We felt that we could have beaten a hulking fellow lately, for ill-using some wagtails, one of our best friends, and also one of the most beautiful of British birds. We have noticed of late great numbers of swallows clustering on the roofs of conservatories, the ridges of houses, &c., as they generally do in the end of September. We presume the excessive drought has lessened the supply of insects for food. On Wednesday the morning came cool and chilly, but the rising barometer and the brightening sun told us the rain was over, and inculcated the necessity of being equally careful as to water. Since then the fierce sun and scorching wind has evaporated most of the moisture that the dried earth drank in so pleasantly on Tuesday. We can only hope that the drought this time will be of shorter continuance.

If no rain fall winter Onions and Spinach should be sown, and left for the rain to bring them up. It is of less use sowing Turnips, Radishes, and Lettuces, unless they can be watered or shaded, as the hungry birds would have all the seed before it came above ground. Lettuces and Endive should be planted out where there is any water to give them. We have, as yet, a good supply of the former from shady places. We have given additional shading by branches of trees to our Celery, as we could not water, and mulched the sides of the rows of Peas to help to keep them green. Cleared off some Peas that had ripened before their allotted time, and had left others standing, though not attractive by their partly withered appearance, because they acted as a

shade to crops of Cauliflower between them. Kept the Dutch hoe going amongst most growing crops, less for the purpose of killing any young weeds than to secure a fresh-stirred surface to keep heat out and moisture in.

FRUIT GARDEN.

Strawberries in pots had the incipient runners taken off and the pots attended to in watering as well as we could. Gave a soaking of sewage water to the late Vine-border, as the berries were beginning to colour too soon from the heat and the dryness at the roots. Should have liked to have done the same to Peaches and Apricots out of doors, as some of the latter are dropping before they are ripe from dryness. Have great difficulty in getting a little clean water to syringe the trees in the orchard-house; and the water-scarcity tells much against trees in pots heavily laden. The rains of Tuesday having washed most of the sprinkling of whitened water from the glass, we renewed it again on Thursday, to arrest rapid evaporation. The fruit is ripening faster than we wished, and faster than it would have done had there been plenty of water to give. With abundance of water we would not have shaded the glass. It has now become our last means of safety. We have also slightly sprinkled the glass of our late vinery with a similar object. This would have been still more necessary if we had removed laterals freely. We had some Grapes sent us to look at the other day which had been parched into a brick-red colour by a too free removal of laterals and leaves, and, perhaps, keeping the enclosed atmosphere rather close and warm, the bunches being thus exposed unprotected to the fierce sun. In some of the hottest days we sprinkled the floors of vineries slightly from a syringe, just to moisten the air a little. The sprinkling with whitened water on the glass is done by colouring, say four gallons of water with as much as a small walnut or hazel nut of whitening. A large space may be dusted from the syringe in a few minutes, and if not thick enough the dose may be repeated. The first shower will take it off, and that just suits this temporary shading. In hot windy days we can thus do with less air, and, therefore, the plants are less dried, a matter of importance only where water is scarce.

Some fruit trees that were showing signs of distress we have mulched round as a substitute for watering. In such continued dryness, and no means of watering, the plants are induced to send their rootlets down in search of moisture, and if this is not remedied afterwards by replanting or root-pruning, there will be a tendency to produce luxuriant unripened, instead of short stumpy wood. Any means that will keep or entice the roots near the surface will thus be of importance for securing fruitfulness.

Went over most of the trees in orchard-house, shortening, nipping, and removing extra shoots, and cutting in half, or taking away altogether any leaves that shaded the fruit too much, as though Grapes are better of a little leaf shade, Peaches, Plums, and stone fruit generally are best when the fruit is pretty well exposed when ripening. Hoed all fruit-borders to keep an open surface. Run the rake along any open spaces in the orchard-house for a similar purpose, and to promote neatness, as all places under glass ought to be very neat and clean. Weeds or filth there are next to unpardonable, even though cleanliness were not as essential to the health of plants, as to the well-doing of animals.

Went over most of the dwarf fruit trees out of doors, gave them a second stopping, and thinned the shoots. Apples and Pears that were stopped early, are, in many cases, showing fine prominent buds on the parts stopped, and the short fresh growth has been again stopped, which will further help these buds farther back. It is a good plan to do the greater part of the pruning of fruit trees now, and to leave no more wood than will be necessary next season, so that more air and sun may act on that which is left. A little finishing up, and removing exhausted wood, but which is now bearing, as in the case of Peaches, &c., should be the chief things reserved for winter and spring pruning.

We have been obliged to whiten all the glass of frames and pits, where Cucumbers, Melons, and even plants where growing, in order to lessen as much as possible the necessity for watering. This also rendered less air necessary. In such weather, Melons, &c., grown in hotbeds will generally need

less water than those in places heated by hot water. The surface soil should be kept open to lessen evaporation.

ORNAMENTAL DEPARTMENT.

Kept the floors of stove-house as damp as we could. Our washed gravel above the tiles of the floor has greatly helped us here. Gave a little manure water to Stanhopeas, which were blooming freely, to increase the size of the blooms, and kept potting young stock of Euphorbias, Poinsettias, &c. Fresh regulated conservatory, and took in more Begonias, Coleus, and Scarlet Geraniums. Epacrises, and winter Heaths should now have more sun to ripen the wood, but the pots had better be protected from the fierceness of the sun's rays, as, if the pots are full of roots, these are apt to be burned when close to the sides of the pot. Care should also be taken to moisten the whole ball when watering. Even our favourite resource of ringing the sides of the pot will not prove an unerring guide in this respect. If watering has gone on for some time, and the ball has not been thoroughly moistened to the centre, the dry part there will keep on increasing until it will at last repel water like the feathers on a duck's wing, and what water is given will under these circumstances chiefly escape by the sides of the pot, and if damp there, on ringing it, the pot will emit a dull sound as if all the ball were wet. The weight of the pot will be the next test; but in all cases of doubt it is best to perforate the centre of the ball with a small wire, and then water, or plunge the pot for an hour over the brim in a pail of water. Many a fine plant has thus been saved that otherwise would have dwindled away until it went to the rubbish-heap. When flagging in an established plant takes place, notwithstanding repeated waterings, it may almost be certain that the ball is dry at the centre. We say established advisedly, because young plants will often flag when wet enough, because the roots have not had time to supply moisture to meet the demands of evaporation. A syringing or a shading in their case will often be of more importance than watering at the roots. But in the case of old-established plants which common watering fails to aid, the placing them in a tub of water for half an hour or more will often prove a sovereign remedy.

Removed lots of Gloxinias, Achimenes, &c., to pits, frames, and sheds to ripen their tubers and bulbs, and gave all the light and heat possible without artificial heat to the Amaryllis tribe for a similar purpose, and plenty of water until the leaves began to change colour. Free growth in summer, and rest in autumn and winter, are what suit most of these beautiful hybrids.

In contradistinction to the general run of plants, most of the succulent plants, and especially the larger Cacti, can now scarcely have too much sun, and too little water, provided the shoots and stems are just kept plump. The best place for these in August and September, is the south front of a wall or fence, where the sun will play freely on them, and if rains are anticipated it would be well to have tiles or slates placed over the pots, to throw heavy rains off them. Little water at the roots will now be wanted, provided the stems do not shrivel, and then next spring and summer there will be sure to be abundance of bloom. Such succulents are pretty well dried up in the dry season in their tropical or next to tropical homes, and the natural conditions in which they bloom most profusely present us with the key to their successful culture.

We have begun propagating for next season, commencing with Verbenas. For reasons already stated, we will not do much with Geraniums until a week or two have passed. These Verbenas, owing to the great heat, and the little or no watering they have received, have some fly and thrips on them, and the cuttings when made were well washed, by pulling them repeatedly through a wash made of 4 ozs. of tobacco, and as much Quassia chips boiled in a gallon of water, and then the water strained off. The cuttings were allowed to lie in heaps after this washing for half an hour or so, and then were washed again in a vessel of clear water, and shortly afterwards dibbed into pots. We hope by this means to escape future trouble, as Verbenas with thrips or fly on them are a constant source of annoyance, and a little trouble now may save no end of work afterwards. The cutting-pots along with Petunias, &c., are placed on the ground, and covered by a frame, with the high side to the

south. We shall be sorry to give them any artificial heat. It may be wanted with late-struck plants.

The rain of Tuesday just saved our flower-beds for a little longer display. As stated last week, we never saw *Geraniums* much better, the drought, as yet, has affected them but little. *Calceolarias* that were never finer are again showing signs of distress, and we presume we shall be able to give them no help, as water for cattle, let alone plants, is now becoming a serious consideration. We find there was a mistake in printing last week, when the lawn is spoken of as getting "green." It should have been "brown." But for this brownness we question if the principal parts of the flower garden ever looked better. Visitors have expressed their astonishment at such masses of bloom in such drought, and with little or no watering. We cannot expect it to last much longer, as we fear anything like watering is entirely out of the question. Already *Calceolarias* are drooping, and we fear that dwarf and tall *Dahlias*, independently of mulching, must go to the wall, and, unless a soaking rain comes, we must be satisfied if we can save the roots. We mention these facts because already gardeners situated as we are are being found fault with because vegetables are becoming hard, and flower-beds decaying, and fruit falling before it comes to perfection. If water cannot be had, and all other palliatives are taken to lessen the consequent evils, we say, advisedly, that the gardener who does what is possible ought not to be blamed if he cannot accomplish the impossible. That our beds and borders have continued fair up to the present time we attribute to the surface-stirring having prevented cracks and extra evaporation: to giving the little water that could be spared exactly on the principles detailed in a late article on watering, and, perhaps more especially, not to any richness in the soil, but to deep stirring and pulverisation before planting.—R. F.

COVENT GARDEN MARKET.—AUGUST 13.

The supply is well kept up both from home and abroad. Pine Apples, Grapes, and Peaches, are plentiful, cheap, and good. Raspberries are now very scarce, and of Lemons there is a very short supply, consequently they have made a great advance in price. Imports from abroad continue heavy, and comprise Greengages and other Plums, Apricots, Fontainebleau Grapes, Apples, and Pears, in abundance. Morellos are the only Cherries now to be had, and Strawberries are over.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples.....	½	0	1	6	Mulberries	punnet	0	6	10
Apricots	dox.	1	0	3	Nectarines	dox.	6	0	10
Cherries	lb.	0	6	1	Oranges	100	12	0	20
Currants, Red....	½	0	4	0	Peaches	dox.	8	0	12
Black	do.	4	0	5	Pears (kitchen)...	bush.	0	0	0
Figs	dox.	2	0	3	dessert	dox.	2	0	3
Filberts & Nuts per lb.	0	9	0	0	Pine Apples	lb.	3	0	5
Gooseberries	½	0	3	0	Plums	½	0	4	0
Grapes, Hamburghs lb.	1	6	4	0	Quinces	do.	0	0	0
Muscats	3	0	6	0	Raspberries	lb.	1	0	1
Lemons	100	10	0	14	Strawberries ...	punnet	0	0	0
Melons	each	1	6	5	Walnuts	bush.	14	0	20

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.	
Artichokes	each	0	4	0	6	Leeks.....	bunch	0	4	0
Asparagus	bundle	0	0	0	0	Lettuce	score	0	9	1
Beans Broad	½	0	6	0	0	Mushrooms	pottle	1	0	2
Kidney	½	0	3	0	0	Mustd. & Cress, punnet	0	2	0	4
Beet, Red	dox.	1	0	3	0	Onions	bunch	0	4	0
Broccoli	bundle	0	0	0	0	pickling	quart	0	6	0
Brussels Sprouts ½	sieve	0	0	0	0	Parsley ...dox.	bunches	2	0	4
Cabbage	dox.	0	9	1	6	Parasips	doz.	0	9	1
Capelcums	100	3	0	5	0	Pears	quart	1	0	1
Carrots	bunch	0	5	0	0	"	bushel	7	0	0
Caulliflower	dox.	3	0	6	0	Potatoes	bushel	0	0	0
Celery	bundle	1	0	2	0	Radishes doz.	bunches	0	0	0
Cucumbers	each	0	6	1	0	Rhubarb	bundle	0	0	0
pickling	dox.	0	0	0	0	Savoy	dox.	0	0	0
Endive	score	1	3	2	0	Sea-kale	basket	0	0	0
Fennel	bunch	0	3	0	0	Spinach	sieve	2	0	4
Garlic and Shallots, lb.	0	8	0	0	0	Tomatoes	dox.	1	0	3
Herbs	bunch	0	3	0	0	Turnips	bunch	0	4	0
Horseradish ...	bundle	1	6	4	0	Vegetable Marrows	dox.	1	0	2

TRADE CATALOGUE RECEIVED.

Ferdinand Gloede, aux Sablons, near Moret-sur-Loing (Seine-et-Marne), France.—List of New and Beautiful Strawberries. Autumn, 1864.

TO CORRESPONDENTS.

*** We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London. E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

CALADIUMS (J. Powell).—Those you mention were imported from Para.

WIRE NETTING FOR PROTECTING FRUIT TREES (W. F.).—We have no doubt that such a contrivance as that you name will answer admirably for protecting the fruit from birds, but as for protecting the blossom from frosts we are certain they are worse than useless. The wire, as you surmise, will have to be covered with canvas or tiffany to prevent injury from spring frosts, and wasps cannot be kept away by wire netting with half-inch meshes. The fruit we think will not be improved in flavour by being grown in a wire cage, nor will the appearance be improved by the drip from the rusted iron. Used to preserve the buds in spring, and the fruit in summer, we have no doubt that they will answer admirably, in other respects we do not perceive their utility.

AMARANTHUS (Q. Q.).—We do not recognise the *Amaranthus* by the leaves, which only appear to be those of a small-leaved variety of the *Amaranthus melancholicus ruber*. As it has grown so freely, and is so bright in colour, we should certainly save seeds of it, and try it another year. As it does so well outside, we do not think it would seed any better by being taken up, potted, and placed under glass. Having one in a pot place it in a light situation in a vinery, or rather warm greenhouse, and it will seed more surely than if kept in a hothouse. Our *Amaranthus melancholicus ruber* seeds very freely in a greenhouse. If your plant is a better grower than the *Amaranthus melancholicus ruber*, of which it is probably a variety, it will be a valuable addition to our list of ornamental-foiled bedding plants. It is usual for the *Amaranthus* to have the foliage almost green when grown in a strong heat, and partial shade; but the colour becomes brighter when the plants are exposed to the full influence of light.

RAISING FRUITS FROM SPORES (Ruby).—Provide a bell-glass—say one of 6 or 7 inches in diameter, and a pot large enough to allow the glass to go about half an inch into the inside of it. Put a large crock or piece of pot over the hole in the pot, and on this place smaller pieces so as to fill the pot to one-half its depth. A layer of moss or the rougher parts of the compost should then be placed over the drainage, after which fill the pot to the rim with a compost of turfy peat, with a little sand intermixed. Gently press it down, leaving the soil slightly elevated in the centre of the pot. Water with a rose watering-pot, and place the pot in a saucer of water, which should never be allowed to become empty afterwards. Whilst the surface of the soil is wet with the watering, brush the spores of the frond on to the soil with the hand, and when this is done put on the bell-glass. The pot should be kept in a moderately shaded and moist part of the greenhouse. The surface of the soil must be kept constantly moist, which it will be if the saucer be kept full of water, and the bell-glass constantly over the pot. If, however, it becomes dry, a gentle sprinkling of water should be given through a very fine rose. When the seedlings appear the bell-glass may be tilted a little on one side by placing a small stone under the edge. After the seedlings gain strength they should be gradually exposed by removing the bell-glass by degrees, and potted singly when of sufficient strength. You will only succeed in raising the harder greenhouse species in a greenhouse; for the hardy kinds, however, it will answer admirably.

VINES FOR A COOL VINERY (Idem).—For a cool house you cannot have a better Grape than the Black Hamburgh. Plant two Black Hamburghs, two Victoria Hamburghs, one Royal Muscadine, and one Buckland Sweetwater. We do not perceive any insect on the Vine leaf; but we noticed those appearances usually presented by leaves infested with red spider. It is also scorched, probably by water standing on it, and for want of air early. If you notice a very small reddish-looking insect on the under side of the leaves, syringe forcibly twice daily with water, but if the Grapes are ripening, or ripe, light a gentle fire, and sprinkle a little sulphur upon the heated surface, putting it on wet. The *Nasturtium* is certainly very curious, the flower especially, but without seeing the plant we are not able to form a proper opinion of its merits. As a curiosity it is worth preserving, and if you have no objection you may send us a few seeds, and we will prove the plant, and let you know the result.

WILD PLANTS CULTURE (A. G.).—You will be most likely to succeed with these by providing the same conditions artificially as those in which the plants are found to thrive best naturally. Make the soil as nearly as possible like that in which the plants have been growing; and the situation, whether open, sheltered, exposed to the sun, or shaded, and other circumstances, should likewise be taken into account. Most native plants will grow in moderately light loam two-thirds, and leaf mould one-third. Some require a different compost, but we cannot name them without going over the whole of the British Flora. The plants should be taken up whilst in a state of rest, or just on the point of starting into growth, and replanted in their new quarters, due regard being paid to shading and watering them until they become established. Taken as a whole, their treatment does not differ from that of hardy plants generally. An addition of rich soil or manure will assist them, but it must not be given in excess.

VARIOUS (G. H. Green).—The idea that Peas and Beans grow the "contrary way in the pod in leap year" is preposterous. We do not know when Father Gavazzi Peas was sent out.

WHITTLERY'S LOCOMOTIVE SEAT.—We have received several inquiries where this can be purchased. Can any of our correspondents say where?

SPAWN CUCUMBER NOT SETTING FRUIT (Laz).—We think you do not admit sufficient air, and the plants grow quickly and weak. Give air at 75°, and impregnate the blossoms, and we think they will then fruit freely. The plants should have all the light practicable, and the blossoms must be kept dry whilst they are open. The temperature should not be lower than 60° at night.

POT ROSES NOT BLOOMING—COCOA-NUT FERN BASKETS (J. J. J.).—You say your Roses have not been standing out on ashes for the last six weeks. We can only say they ought to have been, and likewise plunged up to the rim in the ashes to preserve the roots from the burning sun. Pot the plants in the beginning of September, and prune them when the buds begin to swell after taking into the house. If the Epacris were shortened in the spring after blooming, the shoots will need but little shortening now. What is done now must be confined to shortening the irregular growths. Mignonette in pots is usually poor and wiry after the first blooming is past, and the plants kept over summer in a greenhouse are the same, which we think is stated in the article to which you allude. It is not necessary to drill any holes in the cocoa-nut shells, except to hang them up by, but a hole may be made at the bottom to let water escape, yet water can pass through the husk, which is different from the shell. The husks contain the fibre so extensively employed for ropes, mats, brushes, &c.

GERANIUMS IN POTS AND PLANTED OUT (Inquirer).—Your Geranium, judging from the leaf and flower enclosed, is probably *Princess of Prussia*, which it much resembles. We are not, however, sure about it, for we did not observe the zone on the leaf, which is always faint; neither is it possible to name Geraniums by a flower or two and a leaf. It is necessary to see the plant to be able to speak decidedly. Geraniums have suffered much this year, like everything else, from the long drought, and yours would suffer more by being in pots. Probably the manure water has been applied in too powerful doses, which is prejudicial, and in any state not preferable to rain water for watering Geraniums in beds. Unless the ground is wet and rich we like to plant Geraniums out of the pots, but in rich soils we prefer them in pots, as their luxuriance is then, to a great extent, restrained, and they flower more profusely. In light soils, however, they are better planted out. If anything, the plants take up best when plunged in pots, and are kept over the winter with greater certainty than when planted out and taken up and potted. There is, however, no danger to be apprehended by either plan.

VINES OLD AND NEGLECTED (H. F., Bristol).—A work will shortly be published at our office, which we think will suit you, and if you are in need of further assistance we shall be glad to afford it. Without a personal inspection, or full particulars of the condition of the Vines, we are unable to advise you at present. Flowers of sulphur and flour of sulphur are the same.

CARROT GRUBS (Bristol).—The larvæ which have devoured the young Carrots are the surface grubs of caterpillars of the Heart and Dart Moth *Agrotis segetum*. They are this year extremely abundant, and very injurious. Hand-picking, in the manner described above, is the best remedy.

RAISING WATER (Short of Water).—If the difference of level between the river and the bottom of the piston of an ordinary pump, notwithstanding the distance of the latter from the river, be no more than 23 feet, we should think that water would be raised. Theoretically the pressure of the atmosphere is equal to supporting a column of water 33 feet in height, but practically it is found that ordinary pumps do not work well when the water has to be raised more than 25 feet on account of its friction in the pipes, and a perfect vacuum not being secured. With such a length of pipe as would be necessary in your case the friction would be great, and the pump, consequently, if it did act would be hard to work. If you could not use a force pump you might construct a cistern into which the water might be pumped with ease from the river, and thence by another pump into the garden.

LA CONSTANTE STRAWBERRY.—In answer to "Hugh Bowditch," and several other inquirers, we can only refer them to our advertising columns. We cannot deviate from our rule of not recommending one nurseryman in preference to another.

MILDEW ON CUCUMBERS (Bert).—The white spots on the leaf of your Cucumbers are, no doubt, mildew, which often, nay almost always, appears in the autumn. If the plants are otherwise healthy, a partial thinning of the vines and covering the ground with fine fresh leafy or turfy mould, and then giving a good watering with liquid manure, will, in general, encourage a fresh growth, and the rapid progress of the disease will be arrested; but it is next to an impossibility to ward it off long, for sooner or later in autumn it will make its appearance and the plant will succumb to it.

CROPPING GROUND AFTER POTATOES (Bert).—You may still plant some Broccoli in addition to the Greens that you say are in, or you may sow a good width with Turnips. Spinach also may be sown as late as the 1st of September if that vegetable be thought likely to be wanted, while a portion of the ground, or some other piece, ought to be prepared for early Cabbages, and a bed of autumn Onions ought to be sown in the third week of August; in fact there are so many ways of occupying ground that we can hardly point out any one in particular better than the rest. If you expect to meet with a market for the produce, and the situation is a sheltered one, a large breadth might be planted with Parsley from seedling plants raised in April, or anything else likely to insure a good return. We would not advise any crop, especially for pig-feeding, rather let those animals come in for their share after their superiors have been served. Some notes on pig-keeping will probably appear in our pages shortly.

MARKET GARDENING IN NORFOLK (L. R.).—We fear we cannot give you much encouragement to start with so small a capital as you possess, especially as your experience is not very great; but if you could obtain work for a time in one of the market gardens around London, you would there see the mode by which the best vegetables in the world are grown, and we need hardly add, profitably too. We think you had better visit some of those neighbourhoods where really good market gardening is practised, and obtain work at once, if even at nominal wages, so as to obtain experience. Most likely it will be necessary to modify this in practice in another locality, still the information so gained is invaluable, and cannot well be obtained by other means. Should you, however, prefer trying without such experience, we would advise you not to attempt to grow too much variety, but rather to aim at producing something (whatever it may be) well, so as to gain a reputation for it, and, thereby, a position, and it will be easy to regulate your operations afterwards.

RASPBERRIES (X. Y. Z.).—We think your soil must be too dry for this fruit, which requires a rather moist cool soil; but by deep trenching and removing some of the gravelly subsoil, and replacing it with soil of a stiffer nature, you have done the best you can to improve it, and a good watering once or twice will be of service during the summer. The fruit you sent was small, and would appear to have suffered from dryness. We should think the variety is the Red Antwerp, but it is difficult to say without seeing it growing.

WATER MELON CULTURE (A. H.).—They require about the same treatment as is usually given to Melons, both as regards heat and watering. The fruit itself will tell you when it is ripe.

HARDY BEDDING PLANTS (W. J. N.).—All the plants named in No. 175 are in cultivation, and may be had through any of the large nurserymen. The best time to obtain a stock is now or in the spring. Cuttings of *Rhododendrons* may be inserted in turfy sandy peat, with one-sixth of silver sand added.

DIGGING ROUND NEWLY-PLANTED PINUSES (J. R.).—This is only necessary when it is desired to move them a year or two after the date of the operation. This insures their removal with a ball, and with greater safety. Unless you contemplate removing them a year hence, it is well to let them alone; for, by doing as suggested to you, you will check growth for a year or two, and that without serving any good purpose. The idea of planting cut-down *Pelargoniums* in flower-beds is preposterous. They should be cut down, certainly, but not plunged, nor otherwise placed, in flower-beds. Such matters are best left to your gardener, who, it seems, is much ahead of the engineer in garden matters.

MUSHROOM-BED OUT OF DOORS (Devonshire).—It should be protected from wet completely, or nearly so, though a gentle shower would not injure the bed after the spawn has run through it. It is necessary, however, to keep it dry whilst the spawn is running, and protected from cold and heavy rains afterwards, for such destroy the spawn and young Mushrooms. For general usefulness there is no better Strawberry than *Keens'* Seedling, and it will do moderately well on the aspect named. We think "Kenfrey's Rudiments of Botany" would suit you.

PROPAGATING MANETTI ROSE FOR STOCKS (An Amateur).—Cuttings of this root freely, if inserted in good soil in the open borders towards the end of October or beginning of November. Cuttings of 6 inches in length will root in this way most freely, taking out the eyes on that part of the cutting which is inserted in the soil—that is, for about two-thirds of the length.

GRAPES NOT COLOURING (A Subscriber).—We think the main cause of the Grapes not colouring is their carrying too heavy a crop. Twenty bunches are sufficient for a healthy Vine to carry on an ordinary length of rafters. We are also persuaded that bedding plants on Vine-borders, in anything like numbers, are out of place, and do more harm to the Vines than the pleasure derived from them warrants. When there is a heavy crop, Grapes are longer in colouring. To prove this to you, we may instance that we have a house in which the Grapes are just now ripe. Most of them began colouring on the 1st of July; and the Vines have borne, on an average, twenty-one bunches each, except two, which have respectively forty-four and twenty-eight upon them. Now, on the Vines bearing twenty-one bunches the berries were as black as jet in eighteen days (July 19th); on that with twenty-eight bunches, in twenty-four days; and in the case of that with forty-four they are scarcely black now, but sufficiently so to enable us to know that they will be very fine after all, as some of the bunches will weigh over 3 lbs. They are all Black Hamburg. We leave you to draw your own conclusions.

BOILER SETTING (C. E.).—We do not comprehend what is meant by a division in the middle of a saddle-boiler, enabling you to have fire only over half the length of the boiler, unless it be that the first half is arched over the fire, and the other fired, or the saddle broken by a bar at the bottom, as you represent it, which will leave a flue through one-half of the boiler, by which the smoke must pass to the other end. If once the smoke ascends it is not practicable to bring it lower than it rises in the first instance. You cannot, therefore, cause it to pass along a flue on both sides of the boiler below the level of the top of the furnace, though you may do so if not below that level, and thence take it over the boiler to the chimney. Your boiler, if properly set, which any one accustomed to such work will easily do, and if the most is made of its heating powers, will heat 800 to 1000 feet of four-inch piping.

WIRE STAND FOR WINDOW (E. D.).—You will have room for three rows of six-inch pots if it be 2 feet wide, which, we presume, it is; but if not more than 1 foot, two rows of $\frac{1}{2}$ inches will be ample. A zinc pan, to fit into the bottom of the stand, would be preferable to a number of potsaucers. You may secure the pots by packing them tightly with moss, which will protect the pots from drying winds, which are so injurious to the roots of the plants. They may further be secured by fastening them with small wires across the stand, and crossed the other way. No equinoctial gales can then move them. We are glad to hear that you have succeeded so well with Grapes in glass frames; and we think, with you, that they would be better 18 inches wide, the shape being immaterial whether it be square or triangular. The small snails must be enclosed when the tiffany bags are put on, either as eggs or otherwise, or they could not possibly pass through afterwards. Oiled paper bags are a novelty, and no doubt would answer perfectly, as they will admit a certain amount of light; and air might be admitted to the Grapes by piercing holes in the paper with a pin. If not well dried before put on they would communicate an unpleasant flavour to the Grapes. The *Daphne odora rubra* has done well, and may have been killed by the Jasmine roots robbing it of support, and the drip of its foliage. *Ceanothus rigidus* should be pruned when it has done blooming, and may then be cut in close. The young shoots should be trained-in without stopping.

PRESERVING ARTICHOKE—REMOVING ASPARAGUS (D. M. Gregor).—Artichokes may be preserved for a considerable time if cut with 6 or 8 inches of stalk attached, and this be stuck in damp sand in the root-cellar. Every three or four days a piece should be cut off the end of the stalk. If you take up old roots of Asparagus they are next to worthless after replanting. We would make new beds in autumn, and plant them with plants two or three years old in the end of March or beginning of April.

BLACK TRIFOLI GRAPE (A Constant Reader).—It is the same as *Frankenthal*.

HARDY HEATHS (An Old Subscriber).—We presume the sand and coals are merely intended as plunging materials.

HEATING A VINERY (D. P. B.).—If we understand you a-right, your house, 90 feet long, is not built on the level, but on the slope, of the ground, and that the difference in direct level, from the one end to the other, is 8 feet. If so you must place your boiler at the lowest end, and allow your pipes to rise to the other end just as your ground slopes. You need no particular boiler. You will need an open cistern, higher than the pipes, at the farther end, or else an open air-pipe there. Fill the boiler and pipes, and light your fire, and you will find that the rise of the pipes will cease the circulation to be more rapid. For keeping out frost two four-inch pipes would do. For early forcing you would need three or four pipes. Of these we would only have one return, and the other flows; and they may all be on the same level, except where they issue from and join the boiler, the flow proceeding from the top, and the return going to the bottom of the boiler.

VEGETABLES RUNNING TO SEED (A Subscriber).—If you read "Doings of the Last Week," you will most likely find out the reason—namely, hot weather and deficiency of water. Many times such plants are starved in the seed-beds, and are likely to bolt, after planting, even though you can give them water. When plants cannot grow freely, so as to make leaves and leaf-buds, in self defense they resolve to perpetuate their kind by throwing up flower-stems and buds.

KITCHEN AND FLOWER GARDENING (A Constant Reader).—Reading, without practice, will never make you a gardener. You should place yourself under the tuition of some competent person before you venture to manage an establishment for yourself.

ORCHARD-HOUSE FRACHES FAILING—EVERGREEN CLIMBERS (W. L.).—Perhaps the wood of the Peach trees was imperfectly ripened. Are you sure the roots were not too dry when the tops were in bloom? The heat from the fire will do good in autumn. The various Ivies would look well against such a wall, and so would the Magnolias, if you are warm enough, and would wait for them to grow.

BOOKS (A Clifton Subscriber).—A new edition of the "Fruit Manual" will appear ere long, but we cannot yet say when. (E. H.).—The "Cottage Gardeners' Dictionary" gives directions for the management of stove and greenhouse plants. For full instructions on the management of particular species, consult the pages of this Journal and the "Florist and Pomologist." There is no special work on the subject which is up to the times.

NAMES OF FRUIT (J. F. N.).—Your Gooseberries were too much bruised for determination, but they appeared to be Crown Bob.

NAMES OF PLANTS.—Although happy to oblige our correspondents whenever possible, they often send such miserable scraps as to render the determination of the species very difficult, if not impossible. (S. A. P.).—No. 5, *Scorina pendula*, named last week, is better known as *Cyanoclis visitata*. (P. Selby, Birmingham).—A Portulacaceous plant, but it is impossible to determine its name without a proper specimen in flower. (W. L.).—*Sturtia pentagyna*; *Cladrastis tinctoria* is a native of Kentucky and Tennessee. (Chemicus).—Both *Todes pollicida* and *Lomaria falcata* are exotic Ferns, the former being from New Zealand and the latter from Tasmania. As far as we can judge from the immature frond sent, the latter is correctly named. (Nos & Dotes).—The Aloe, we presume, is *A. americana* var. *variegata*, but it is hard to say from the tip of a leaf alone.

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

JOTTINGS.

(Continued from page 118.)

AFTER the steady and anxious have left the town, the streets and show-yard are occupied by a different class. Shops are closed, and the young men swell the numbers of spectators; the country people after a certain time are admitted gratis, and then begins the hurry of the show-yard. It is half-past four, and it closes at six. The band of the 200th is lagged, or, as a matter-of-fact countryman said, "tired of too-too-rooing." The real middle-class agricultural element has disappeared, and Sponge's Lóvior, the country-town swell, has taken the place—no improvement. The hearty quarrels of the herdsmen, many under the influence of John Barleycorn, come quite refreshing on the ear. They do not go the length of the two-year-olds and three-year-olds in Ireland, but they are very pretty little feuds as they stand. "Giles woant tell all as he cood about that whoite bull as has fust, but he cood an he wood;" and Tummas answers, "Speak up, and speak out mun; ye've been telling all you knows for years, and you's thinner, and yer children wuss fed." Then Giles whispers to two or three, and they all inspect the white bull, and many shake their heads; and then one points to a particular mark, and Tummas sees it, and says, "I knows he's bad there, and he looks older, but he yaint." Then there's a sort of murmuring, and one of the young men from the town comes up with friends, or, as "Immortal Will" has it, "accompanied;" and after knowingly handling the bull (we got sadly kicked at that exercise once), he says, with a grave air, and all the *éplomb* of an authority, "A first-prize bull should, like Cæsar's wife, be above suspicion." "Gie us your hand," says Giles, but our townsman is wise, and had "skedaddled" as soon as he delivered himself of the oracle. "What did'n say?" says Tummas, who was not deaf, but what they call "hard of hearing," which means he would not know he was in danger from a goods train till he felt it. "What did'n

say, and whose wife was he talking about?" "Yours," said a bystander. "He makes a mistake," says Tummas, "for I never was married."

It is wonderful how towards the close of the day the eloquence of the men in charge increases, and what faults they find with the winners. The contest runs between the youth of the town and the matured wisdom of the country. "Brahmas beat everything in the way of fowls," says a poultryman. "Do they lay twice a-day?" says a townsman. "Always," is the answer, "except Sundays and holidays." Townsman evaporates.

Then the time comes for removing the stock. Little knots form round the prize animals, and many a hardly-earned sixpence is spent to decorate the prize bull or horse with ribbons, that his success may be apparent to all. "I hope," says a beaten man, "you have made your great coarse animal fine enough, with all your bows and rosettes. I never did like him, and I don't." "Never mind, don't be jealous; go and borrow a hat-band, and put round yours."

Without any disorder, or ill feeling, the scene is entirely changed from what it was a few hours before. The masters are gone, the Committee men are at the dinner. The ladies went with the band. Here and there animals are seen moving across the ground. Carts are admitted to fetch poultry and sheep. Implements are being packed preparatory to removal. The task of keeping order devolves on the policemen, who do it well, and give notice to clear the ground.

The crowds are now scattered over the town—harvest for the inns and public-houses. The countrymen are growing more demonstrative, and such groups as many of those in Wilkie's inimitable "Village Festival" are to be seen everywhere. It is, however, inoffensive, and remains strictly agricultural. The merits of crops, animals, and ploughing, form all the conversation. Dancing-booths, rifle-galleries, photographic studios, fortunetellers, present their charms to the lads and younger men, and the recruiting sergeant plies a good trade. When we were young there were such things as ballads. We recollect that close to Harewood Gates, in Oxford, a man used to decorate the whole of the dead wall with rows of ballads, pinned on strings. In London such things have passed away, to make room for the "Darkie's Album," "The Songster's Companion," &c.; but in the country there is still a sale, and a man and woman singing an old song to an old tune find a ring of listeners, and flocks of customers. From the public-houses, choruses, wherein the "Bold Drag-goan," and "Delight of a Shiny Night" play a principal part, are heard. The men leading home the prize animals are treated wherever they go, till at last they are obliged to admit "they never knowed that horse go so crooked afore; why he went right across the street, and stumbled ever so many times!"

Peace gradually creeps over the little town, and save that now and then some "wildish fellows" gallop down the streets, and a distant noisy chorus is heard, nothing would remain to remind one of a busy day.

The improvised avenue looks sadly the next morning; the flags seem out of place without crowds. It is with the town as with a moderate family after the annual "party," it is putting-away day.

THE AGRICULTURAL HALL POULTRY SHOW AND THE POULTRY CLUB.

I SEE in your Journal of last week that Mr. Tudman invites your correspondents to "communicate directly," and they shall have all the information he can give.

In the middle of last month I wrote to Mr. Tudman asking him for the rules and regulations of the Poultry Club, with the view of becoming a member, adding some questions so like the suggestions put out by "Ecomet" that they would appear to come from the same person.

The answer I received was to the effect that the rules and regulations of the Poultry Club are available to members only—that the Club finds judges only for poultry shows, and that "they are not in any way responsible for the prize list, nor do they get up shows."

If the Poultry Club are not answerable for the prize list, nor do they get up shows, how is it that the prize list of

the forthcoming poultry show, at the Agricultural Hall, is headed with the words "Under the patronage and management of the Poultry Club?"

If the Poultry Club did not take upon itself to find judges for shows, and had not been advertised as taking the management of one, but was simply an association of gentlemen for purposes of their own, my application to Mr. Tudman might have been construed into an act of impertinence. Under the circumstances above mentioned I had a right, in common with every other exhibitor of poultry, to inquire what were the rules and regulations of the Club.

If this be the kind of information to be furnished, I suppose your correspondents, who are invited by Mr. Tudman to communicate immediately, will be as well satisfied as I am.

A public statement of the rules and regulations, with the objects proposed to be accomplished by the Club, would save your correspondents and Mr. Tudman much trouble.

It may be that this Poultry Club is a very desirable and useful body, but it certainly does not go the right way to win the confidence of the public.—GEORGE MANNING.

NEWMILLERDAM POULTRY SHOW.

THIS was held on the 2nd inst., when the following prizes were awarded:—

GAME (Red).—First, G. Hellewell, Sheffield. Second, J. Charlton, Bradford.
GAME (Duckwing).—First, J. Charlton, Bradford. Second, G. Hellewell, Sheffield.
GAME CHICKENS.—First, J. Croxland, Wakefield. Second, G. Hellewell, Sheffield.
COCHIN-CHINAS (Buff).—First, S. Pickard, Wakefield. Second, W. Dawson, Hopton.
COCHIN-CHINA (Cuckoo).—First, W. Dawson, Hopton. Second, S. Pickard, Wakefield.
COCHIN-CHINA CHICKENS.—First, W. Cannan, Bradford. Second, J. Croxland, Wakefield.
DORKINGS (Grey).—First and Second, S. Pickard, Wakefield. *Chickens.*—First, J. Hirst, Boyn Hill. Second, S. Pickard, Wakefield.
SPANISH.—Prize, W. Cannan, Bradford. (Only one entry.)
PERKINETS (Golden).—First, J. Ellis, Leeds. Second, H. Himsworth, Lappet. *Chickens.*—First, W. Cannan, Bradford. Second, J. Ellis, Leeds.
PERKINETS (Silver).—Prize, W. Cannan, Bradford. (Only one entry.)
CHICKENS.—First, J. Ellis, Leeds. Second, W. Cannan, Bradford.
ANY DISTINCT BREED.—First, W. Cannan, Bradford. Second, S. Scholfield, Heckmondwike.
BANTAMS (Black or White).—First, W. Cannan, Bradford. Second, J. Charlton, Bradford.
BANTAMS (Any variety).—First, S. Scholfield, Heckmondwike. Second, J. Wade, Leeds.
TURKEYS.—First and Second, J. Fawcett, Wakefield.
GESE.—First and Second, J. Fawcett, Wakefield.
DUCKS (Rouen).—First, J. Hirst, Boyn Hill. Second, R. Atha, Boyn Hill.
BANTAMS (Game).—Prize, G. Hellewell, Sheffield. (Only one entry.)

YORKSHIRE AGRICULTURAL SOCIETY'S POULTRY SHOW.

THE above Show, which is one of the migratory class, was held at Howden on the 3rd, 4th, and 5th inst. The poultry entries were not so numerous as at some of this Society's previous Exhibitions, but many pens of superior excellence were shown.

In the class for old *Spanish*, Mr. Rodbard was first; but the commended pen of Mr. Beldon would have been a formidable competitor for the first prize if the cock had not been diseased in his feet. Mr. Rodbard was also the exhibitor of a good pen of dark *Cochins*. In the adult *Game* classes, Mr. Beldon and Mr. Julian exhibited some very good birds, and the competition between them was very close. The *Game Chickens* were not so good as might have been anticipated at a Yorkshire Show. Mr. Beldon obtained the chief share of the *Hamburgh* prizes; and in the *Poland* classes he was without a competitor.

The following is a list of the awards:—

SPANISH.—First, J. E. Rodbard, Bristol. Second, S. Robson, Brotherton. Highly Commended, H. Beldon. *Chickens.*—Prize, S. Robson.
DORKING.—First, F. Key, Beverley. Second, M. Hunter, Green Hamerton. *Chickens.*—Prize, Rev. J. F. Newton, Kirby-in-Cleveland.
COCHIN-CHINA (Black or White).—First and Second, W. Dawson, Mirfield.
COCHIN-CHINA (Any Colour not Black or White).—First, J. E. Rodbard, Bristol. Second, H. Beldon, Bingley. *Chickens.*—Prize, S. Robson. Highly Commended, H. Beldon.
GAME.—First, H. M. Julian, Hull. Second, H. Beldon. Highly Commended, J. N. Holmes. *Chickens.*—Prize, H. Beldon. Commended, J. Thornton.
HAMBURG (Golden-spangled).—First, H. Beldon. Second, C. Cowburn, Leeds. *Chickens.*—Prize, C. Cowburn.

HAMBURG (Golden-spangled).—First, H. Beldon. Second, S. Smith, Halifax. Highly Commended, H. Pickles. *Chickens.*—Prize, H. Beldon. Highly Commended, H. Pickles.

HAMBURG (Silver-spangled).—First, H. Beldon. Second, E. Ardington, Howden. *Chickens.*—Prize, H. Beldon. Highly Commended, C. Cowburn.

HAMBURG (Silver-spangled).—First, H. Pickles, jun., Skipton. Second, W. Beldon. *Chickens.*—Prize, H. Pickles. Highly Commended, H. Beldon.

POLAND.—First and Second, H. Beldon. *Chickens.*—Prize, H. Beldon.

ANY OTHER DISTINCT BREED NOT PREVIOUSLY CLASSED.—Prize, H. Lacy, Hebden Bridge. Highly Commended, F. Powell; H. Beldon. *Chickens.*—Prize, H. Lacy.

BANTAMS.—Prize, H. Beldon.

SINGL COCKS.—*Spanish.*—Prize, H. Beldon. *Dorking.*—Prize, H. Beldon.

Cochin-China.—Prize, J. Bell, Thirsk. *Game.*—Prize, H. Beldon. Highly Commended, H. M. Julian. Commended, J. Rannison. *Hamburgh (Golden-spangled).*—Prize, H. Beldon. *Hamburgh (Silver-spangled).*—Prize, S. Smith. Highly Commended, H. Pickles. *Hamburgh (Silver-spangled).*—Prize, H. Beldon. *Hamburgh (Silver-spangled).*—Prize, H. Beldon.

GESE.—First, R. Johnson, North Cave. Second, S. Walker, Howden.

DUCKS (Rouen, or any other Breed not Aylesbury).—Prize, W. Bradley, Pillington.

The Judges were Mr. J. H. Smith, Skelton Grange, near York; Mr. Jolly, Acomb.

PIGEONS AT NEWCASTLE-UPON-TYNE AND DARLINGTON SHOWS.

At the Exhibition of the Northern Counties Agricultural Society at Darlington Mr. J. W. Botcherby, of Darlington, acted as Judge, as he did also at the recent Show of the same Society at Newcastle-on-Tyne. The re-appearance of Mr. Botcherby as a Pigeon Judge renders it necessary that something should be done to prevent a recurrence of such decisions as those named by Mr. Yardley at page 97, and alluded to in your own note relative to the many strange details you have heard "about the Pigeons at Newcastle-upon-Tyne."

To my having exhibited Pigeons at the last Darlington Show, and Mr. Botcherby having repeatedly declared at the time in answer to universal expressions of dissatisfaction that "he would never judge again," may be attributed the fact of the decisions having escaped criticism so far as I am concerned. Now, however, that Mr. Botcherby has once more ventured to undertake a post for which he is altogether unfitted, further silence would be an injustice, more particularly as it is well known that the appointment of Mr. Botcherby at Darlington was most strenuously opposed by one of the Committee, a gentleman well able to give an opinion; and that he was met by the declaration of the Honorary Secretary when the Judges were appointed that he had engaged Mr. Botcherby and would not have any one else! "A COMPILER OF THE DARLINGTON SCHEDULE," who has ably exerted himself in the poultry department, and to whom its consequent improvement is justly due, will no doubt correct me if such be not the case.

A few remarks will enable your readers to form their own opinions of the awards at Darlington. In the first place, a local exhibitor penned the birds, and his "partner in the fancy" accompanied the Judge, the only pen exhibited by this person taking the first prize, though, with the exception of a half-crown prize at Middlesborough, it never figured as a prize pen at any other place. In Carriers some of the best birds were unnoticed. The silver cup for the best pen in the Show was awarded to an old Dun cock, a draft from the loft of one of our well-known exhibitors; while one of the best Carriers in the kingdom and in her prime, a black hen belonging to Mr. Else of London, was shown. In Powters, a hen second at Birmingham a few days previously was not considered worthy of commendation, and £5 was refused for another unnoticed bird in the same class. At Glasgow, a few days subsequently, two pens entirely passed over at Darlington took first position in, perhaps, the strongest competition known. The other classes were no exception. In one two cocks were first against a very superior pair, and so on; but if further particulars are required they can be forthcoming.

One of the Honorary Secretaries of the Newcastle Show, Mr. Shorthose, was at Darlington, and could scarcely be ignorant of the extreme dissatisfaction then so loudly expressed; and it is unaccountable how that gentleman could have been induced to sanction such an appointment for Newcastle. At the latter place, in Powder cocks a bare-skinned bird took first; in Barbs the best cock stood second, while the best hen was passed over altogether; in Jacobins

the best were not mentioned, while the worst in the class—a pair of coarse Yellows, the cock nearly without hood, took first. In Owls perhaps the most unusual decisions were given. Coarse rubbishy Blues won; while good Whites, and a most exquisite pair of Black-tailed Whites, extraordinary in head and beak, were unnoticed. In the medal class for Owls, a pair of Squeakers with their nest feathers on won against a splendid pair of Foreign Blues. In Any other variety white Dragons took first; but it seems from Mr. Yardley's letter that on his bringing to light his pair of Satinettes this had been reversed. As a climax, Mr. Hewitt, observing that an exhibitor had taken first and second in one class, induced the Secretary to reverse the cards "to save appearances."

Comment is unnecessary. Facts incontrovertible are given; and exhibitors must take means to prevent a repetition of such escapades as have brought an unenviable notoriety on the two northern shows.—A FANCIER.

[Our rule is not to criticise the awards of competent Judges; but where a Judge by repeated wrong decisions demonstrates that he is not qualified for the office he has accepted, we feel that it is our duty to denounce the error, especially when a Committee persists in retaining his services. Such a case is that now before us; and having the testimony of three well qualified critics, all concurring in denouncing Mr. Botcherby's awards, we have no hesitation in inserting this letter from one of them; and we hope for his own sake, for the sake of the Society, and for the sake of exhibitors, he will henceforth decline acting as a Judge of Pigeons.]

I WAS glad to see a complaint from Mr. Yardley of the judging, or rather misjudging, of the Pigeons at Newcastle-upon-Tyne Poultry and Pigeon Show. I can bear testimony to the truth of Mr. Yardley's statement.—HONESTY.

"A DEVONSHIRE BEE-KEEPER" VERSUS THE "TIMES'" BEE-MASTER.

SUBJOINED are two letters which our esteemed correspondent, Mr. Woodbury, has addressed to the *Times* in reference to the articles which have appeared in its columns from the pen of "A BEE-MASTER." We publish them without comment, for the subject could not be in better hands.

"TO THE EDITOR OF THE 'TIMES'."

"SIR,—As an English bee-keeper of many years' experience, I have been grieved at perusing the letters on the subject which have recently appeared in your columns, and which I cannot but think are likely to give our continental neighbours and transatlantic brethren a very mean idea of the skill and knowledge of British apiarists. Every one has a right to expect that when a subject is mooted in the *Times* the writers who step forward to discuss it will be at least up to the age in which they live; and it is because I perceived the gentlemen whose letters have already appeared are writing in the spirit of a bygone time that I venture to point out a few of their mistakes.

"First, with regard to bee communities remaining at peace with each other. This they will do so long as both are strong and tolerably prosperous, and honey continues plentiful out of doors; but as soon as honey-gathering is over, innumerable spies from strong colonies try the mettle of their neighbours, and should any one or more betray signs of weakness, the war of Germany against Denmark is enacted on a small scale, with this difference, that the invaders take absolutely all, and utterly destroy the vanquished; unless, indeed, the latter, as sometimes happens, join the confederation, and assist in the plunder of their own stores. Whatever virtues bees possess, therefore, honesty, or even the slightest respect for *meum et tuum*, is certainly not among them; nor have they any other guide in this particular than

"That good old rule, the simple plan,
That those should take who have the power,
And those should keep who can."

"But, while pleading guilty to the sin of dishonesty among my little favourites, I must absolutely acquit them

of the charge of drunkenness, or a 'passionate liking for rum and strong ale.' Neither the one nor the other will bees meddle with, unless their natural repugnance to such abominations be overcome by their liberal admixture with either honey or sugar in some form; nor will they even in this case accept the proffered libation so readily as if pure water were used to dilute it.

"Mr. Harbison, a sturdy citizen of the American Republic, considers the queen a simple machine for laying eggs, absolutely under the workers' control, who stimulate or repress her fecundity according to circumstances. I do not go these lengths, but I know Mr. Harbison to be far nearer the truth than your correspondent who talks about 'the queen's giving orders,' and says that 'if you interfere with her the watcher bees will sound the alarm, and a thousand stings, like swords, will be unsheathed.' I am in the constant habit during the season of handling queen bees, and I can assure him that nothing of the kind ever takes place. The note of distress from a captive queen passes totally unheeded by her subjects; and though a few stray workers may alight on the bare hand that holds her prisoner, and even lick her as she is held between the fingers, the sight of her captivity has no effect in moving them either to anger or resentment. When she is indeed gone for ever they generally fall into confusion for a time, and appear to seek her, but even this is not invariable. I have, moreover, another fact to communicate, which will probably startle many of your readers. Regicide in its worst form is not unfrequently perpetrated by bees. The deaths of Charles I., or Louis XVI., or even that of Marie Antoinette, were indeed merciful when compared with that inflicted by these little termagants on their own mothers. Hurling in one instant from the height of popularity to the depth of misery, the poor deposed sovereign finds herself pinioned and unable to move a limb, among a dense mass of her unnatural children; and there she remains, without the possibility of escape, until death, very many hours afterwards, puts an end to her misery. Often have I seen the poor dried and shrivelled carcase, betraying in the distorted rigidity of every limb the severity of its last agony; and all this, so far as we can discover, without a cause! The youngest and most fertile queens are sometimes victims, and that even at a time when their loss entails extinction on the community. Nay! listen young and newly-married brides, I have known queens devoted to this horrible and lingering death immediately on their return from their wedding excursion, and before they had experienced the joys of maternity.

"Stewarton (Ayrshire) hives are octagonal, not hexagonal, in form, nor is there the slightest reason for imagining that the bee, which builds a hexagonal cell, would prefer a hive of the same shape. So far from a cottager being able easily to make the four compartments comprised in a Stewarton-hive, it would puzzle many a skilled carpenter to dovetail even a single octagonal box accurately together.

"Common sugar (lump sugar is best), does not require to be exposed to a heat of 300° to be available by bees. Three pounds of lump sugar mixed with two pounds of pure soft water, and boiled a minute or two, forms excellent bee food.

"Pressure by a watch-key and tobacco, as remedies for a bee sting, are no new discoveries. I advise any one stung by a bee to take the sting out as soon and as carefully as possible, leaving no part of it behind, and then let the wound alone. All the so-called remedies which I have tried (and their name is legion), only irritate and increase the swelling, which otherwise would soon disappear.

"If any one has a swarm consisting only of 5000 or 6000 bees let him not take the trouble of hiving it. A good swarm will weigh 4 lbs., and I have known one weigh 8 lbs. Now 5000 bees are computed to go to a pound, and this is not too many, for a friend of mine counted and weighed 5020 freshly-killed bees this spring, and they only weighed 12½ ozs. Let any one, therefore, do a simple sum in mental arithmetic and say if 15,000 to 30,000 are not within the mark, even allowing for the weight of honey carried off by the swarm.

"Brood in supers is not always drone-brood, nor is the heat of drones necessary for the maturation of brood. If it were, they would not be absent in spring, when the weather is coldest, and a great quantity of brood is hatched, nor would they be destroyed in autumn, when the temperature

is falling. There is, of course, a well-known and sufficient reason for the multitude of male bees in summer, and that is that queens may run no unnecessary risk by unavailing matrimonial excursions, as their loss at that time would entail destruction on the entire community. Neither does the queen exercise 'queenly prerogative and dignity' by selecting her husband. She launches into the air unattended, and there mates sometimes with a drone from a hive a mile or two distant from her own.

"Bees are never nursed by other bees. They are strict utilitarians, and totally devoid of sympathy. 'Those who cannot work shall not eat' is a law applied with stern impartiality alike to the disabled worker and useless drone. He, therefore, who would teach or learn a lesson in charity must look elsewhere.

"With regard to the hive described and recommended in the *Times* of the 4th inst., it is simply one on the 'nadir,' or 'nether' principle, a principle which has often been tried, and as often found wanting; and for this reason it is opposed to the instinct of the animal itself—an instinct which prompts it to place its honey above and its brood below. It may, therefore, be safely asserted that any stock of bees which is compelled to place honey in a 'nadir' would collect double or quadruple the quantity in a 'super.'

"I feel I owe an apology to those gentlemen upon whose letters I have commented thus freely. Their motives are so unquestionably good that their errors would have passed unnoticed by me had they sought publicity through any other channel. As it is, I am very desirous of making it known to our continental and American friends that their letters do not convey an adequate idea of the amount of knowledge of the subject possessed by British bee-masters. Not only have we frame-hives second to none ever made for ingenuity and convenience, as well as the necessary skill to avail ourselves of the advantages they afford, but we are no strangers to the superiority of the Italian race of honey bee (*Apis Ligustica*), and are even now ransacking the world in the search after other species, while we have repeated and verified the experiments and investigations of Von Siebold, which establish, beyond question, the truth of Dzierzon's great discovery of parthenogenesis in the honey bee.—T. W. WOODBURY, Mount Radford, Exeter, Aug. 6."

"TO THE EDITOR OF THE 'TIMES.'"

"SIR,—Although we are informed on the authority of 'A BEE-MASTER,' that 'bees have not learnt to read the *Times*,' we must not be surprised if it should be announced by him in a future letter that his bees have added this essential accomplishment to their innumerable moral virtues. Pending their acquirements of this faculty however, and the consequent interruption which is to bring me to my senses (or to drive me out of them), permit me to suggest, that in these days of railways and excursion trains, a trip into Devonshire would entail little fatigue or expense on their champion. I should myself be delighted to see him, and should have little difficulty in proving to his satisfaction the truth of every statement made in my letter of the 6th inst. I am now writing in a room overlooking a garden containing a score of inhabited hives with the queens of each of which I am on visiting terms. As your correspondent among other compliments is pleased to accuse me of 'crass ignorance,' I shall be happy to take him into this garden, and, after describing the peculiarities and personal appearance of the queen of each hive, to introduce him to every one in succession, and thus give him the opportunity of testing for himself the correctness of my description. Can 'A BEE-MASTER' do as much with his bees?

"It seems, also, that I am an 'irritable old apiarian,' whilst 'A BEE-MASTER' is 'really not irritated.' Of the amount of 'irritation' displayed on either side I leave your readers to judge, and am happy to say that your correspondent, who I am informed has a son as old as I am, is somewhat at fault with regard to my age, though what this has to do with the question passes my ability to discover."

"My bees are always well provided with food; but even his guess of poverty is as wide of the mark as the other. Avarice is as common among bees as among 'old gentlemen,' and the best provided stocks are often the most predatory.

"When 'A BEE-MASTER' pays me a visit we will try the experiment with 'strong ale,' and in the meantime I will lay in such a stock of sauces and other condiments as shall render his meal, which is to consist of bees, beer, and feeding-pan as digestible and as little disagreeable as possible, "I may remark in the interim, that the presence of beer in bee-food has long been dispensed with by the best modern apiarians.

"I do not, as I said before, go all lengths with Mr. Harbison, nor am I a 'Red Republican,' or even an admirer of Abraham Lincoln, but I am a conservative in politics, a churchman in religion, and a loyal subject of Queen Victoria. Nevertheless, I re-assert, that regicide by bees has frequently come under my observation and is not unknown to others, although I am, I believe, the first Englishman who has recorded it in print. Those who know me are aware that I am not given to exaggeration, and in this case I repeat, that I have told merely the plain truth. Will 'A BEE-MASTER' kindly inform me in what respect he deems a conscientious search after, and a keen appreciation of, the truth as regards bees incompatible with the strictest orthodoxy both in politics and religion? I fancy if he will read through his last communication calmly and dispassionately, he will come to the conclusion that the 'machine for talking [or writing] nonsense,' has been called into play on his side.

"Sugar in order to be converted into barleysugar must first be diluted with water, and in this state is available to bees. Am I not correct, therefore, in stating that subsequent exposure to a heat of 300° is unnecessary? When 'A BEE-MASTER' visits Exeter, I shall be happy to show him how to administer liquid food to bees without either smearing their wings or clogging their feet.

"But it appears I have not 'watched the habits of bees,' or studied the results of the investigations of Huber.' This is another random shot, and like the preceding ones it flies under the mark. Huber (or rather his assistant, Francis Burnens), was a keen and generally an accurate observer, far in advance of the age in which he lived; but he was not invariably correct, and I have studied his investigations and the habits of bees sufficiently to know when Huber is to be relied on and wherein he was mistaken. The imputation of 'ignorance' on this point comes, moreover, with ludicrous incongruity from a man who not only fails to recognise, but absolutely derides as 'absurd' Huber's 'explanation of two thousand drones where there is only one queen, with, perhaps, a couple of princesses,' an explanation which has been deemed sufficient and satisfactory by every intelligent apiarian from his time to the present day.

"A swarm consisting only of five thousand bees has, it is said, been kept through the winter by feeding, and has done well in a magnificent honey season. May we venture to ask for particulars? How was the number of bees ascertained? Were they counted, or were they weighed? If counted, what was their exact number? If weighed, their precise weight? Were they hived in an empty or a combed hive? What did they cost in food? I need hardly say that if they cost as much in food as the purchase-money of a good swarm, they really were not worth hiving.

"With regard to the utter absence of sympathy in bees, I have nothing to modify or retract. Allowing for the influence of imagination, 'A BEE-MASTER,' doubtless, describes what he has seen pretty correctly. He has erred only, as many others have done before him, in ascribing the actions of his bees to wrong motives. Had he witnessed the *dénouement* he would either have found the disabled worker left to die by inches on the floor-board totally unheeded by her sisters, or bundled neck and crop out of the hive shortly afterwards.

"Permit me in conclusion to say a few words to those gentlemen who have written thanking me for exposing some of the inaccuracies of your Tunbridge Wells correspondent, whose effusions, as they very justly remark, are likely to do far more harm than good. If it were desirable I could of course more than double the list of his mistakes which I have already noticed. But enough has been done. If the *Times* 'BEE-MASTER' continues steadfast in the pursuit which he appears to have taken up so ardently, he may in time become worthy to bear the title he has somewhat prematurely assumed. Whenever that period arrives we may be very sure that he will look back upon his share in this

correspondence with mortification and regret. On this account I should be extremely sorry to adopt a course which might probably lengthen the discussion, and by so doing call a deeper blush to his cheek, and add poignancy to his regret.

—T. W. WOODBURY, *Mount Radford, Essex*, 11th August, 1864.

"P.S.—Since writing the above, I have received an admirable letter from your correspondent, the Rev. William Law. I should be indeed glad if 'A BEE-MASTER' would meet me in the same spirit."

BEES UNITING VOLUNTARILY WITHOUT FIGHTING.

A CURIOUS circumstance has occurred to one of my hives this year which may be worthy of recording. A very strong hive about three years old swarmed in May; in a few days it swarmed a second time in a high wind; at the same time the hive next to it on the right side swarmed likewise, and both swarms went into this hive, which I shall call No. 2. About three days after, the bees from No. 2 marched into No. 1 in great numbers without being interfered with. About a fortnight afterwards, early in the morning, I found the bees from No. 1 hive walking leisurely into No. 3, on the left hand, without being taken any notice of by those they were visiting. They walked steadily along the bench in a line about 2 or 3 inches apart. After this happened I felt the weight of No. 1 and found it was very heavy.

Yesterday I found No. 1 hive all in commotion as though young bees were coming out dancing for joy; but as this continued until the evening, I perceived something was wrong, and on lifting the hive found it to be almost empty. I, therefore, lifted the hive and after a few minutes rapping all the bees left it and crowded into No. 3. I am at a loss to account for the hive flourishing so well, and yet deserting without fighting.—H. M.

[The probability is, that the young queen of No. 1 was lost through mistaking her hive on the return from her wedding trip. When hives are close together this accident is very apt to occur. There is, also, much more intercourse between stocks so situated than we have any idea of, and the voluntary union of two colonies under such circumstances is, therefore, not much to be wondered at.]

COMMENCING BEE-KEEPING.

HAVING just read Mr. Woodbury's very interesting letter on bee-keeping in the *Times*, and also those which have recently appeared in the same journal, I feel myself greatly perplexed how to reconcile the various methods of management, seeing that each individual professes to give the result of much experience. I should tell you that I am ignorant of any method of management, and am about commencing bee-keeping next spring. Will Mr. Woodbury be so obliging as to favour me with his advice as to what books I should procure upon the subject?—W. G.

[My advice is, "Do not attempt to run until you are able to walk," or, in other words, do not depart much from the old well-understood mode of management until you have had some experience, and then advance by degrees. Get "Bee-keeping for the Many," price 4d., and begin with Payne's improved cottage-hive made rather larger than therein described, on which put small supers. These hives will throw swarms, and thus increase your stock. If they get too numerous try to drive some of the swarms, and unite to others in the manner recommended in the little manual. As you become accustomed to the management of bees you will probably wish for better and more convenient hives, such as frame-hives. To this there can then be no objection, but I never advise any one to buy costly hives until they have sufficient skill to avail themselves of the advantages they afford. Read *THE JOURNAL OF HORTICULTURE*, and avail yourself of editorial advice in any difficulty.—A DEVONSHIRE BEE-KEEPER.]

SUNDERLAND AND NEWCASTLE ORNITHOLOGICAL SOCIETY.
—We understand that the first annual Exhibition of this Society will take place at the Athenæum, Fawcett Street,

Sunderland, on the 1st, 2nd, and 3rd of November next. Nine silver cups, value £5 each, will be offered for competition, five of which are offered by John T. Lawrence, Esq., of Liverpool. For particulars as to the prizes offered we must refer to the published schedules, which may be obtained of the Honorary Secretaries, Messrs. G. R. Potts, Albert Forge, and J. R. Robinson, 55, Nile Street, Sunderland.

CUCKOOS.

HAVING a young Cuckoo which I am very anxious to keep alive through the winter, will any of your correspondents who have ever kept one, kindly inform me how they have fed it? I am feeding mine now on hard-boiled egg, chopped meat, caterpillars and moths when I can get them, but I am afraid when the insect season is over my bird will suffer from the loss of its natural food.

Any hints as to feeding and temperature, will greatly oblige.—A. K. C.

TO PRESERVE RHUBARB.—Strip off the peeling, cut into inch pieces, then put 1 lb. of sugar to 5 lbs. of Rhubarb, stew until soft, then strain out the juice by pressing through a cloth, spread the Rhubarb on plates, boil or simmer down the juice quite thick, turn it over that on the plates, dry it in an oven or by the stove, the same as fruit, put into a jar and pound it down hard, covering closely, and it will keep for years; and, flavouring with essence of lemon, it will make a far more delicious pie than when green—of course, more sugar must be added when used.—(*Canada Farmer*.)

OUR LETTER BOX.

APPLES AS FOOD FOR POULTRY (P. M. K.).—We can say nothing as to apples as food for poultry, but they will eat them readily if given now and then for a change. Given whole, they will pick them to pieces, or if chopped fine they will pick the fragments readily. They are wholesome for them.

HENS EATING EGGS (*Amateur*).—The desire to eat eggs shows that a hen or pullet is out of condition. A diseased state of the inside will be brought about by the use of meat, greaves, and other stimulants. They have produced early eggs, but also have caused an inward craving that can be satisfied only with unnatural food. She therefore eats her eggs, and will do so till she is cured. She must be purged frequently (every other day), with castor oil, a tablespoonful at a time. Be careful not to over-feed, and avoid all stimulants. Place hard artificial eggs in her nest, or where she lays; and although you may lose her present laying, you will probably save the next.

BEES (*J. Newland*).—All questions relating to this subject should be addressed to the Editors.

PURCHASING BEES AND BEE-HIVES.—WORKS ON BEE-KEEPING (*Marple*).—The best time to buy bees is in March, when they have stooed the winter. Strong and sufficiently heavy stocks should be selected, and the judgment of a skilled bee-master obtained if possible. The price of a stock of bees, in the spring, would probably vary from 15s. to 30s. in different localities; and we are unable to recommend one place as better than another for making the purchase. Bees will not be injured by a change at any season, if the distance be not less than a mile and a half; but if moved in warm weather, and when the combs are heavy, great caution is requisite. We cannot undertake to recommend any particular hives, but may state, generally, that Payne's improved cottage-hives are well adapted for ordinary, and Woodbury frame-hives for scientific, bee-keeping. Any kind of hive can be secured against accident; and Messrs. Neighbour & Sons, 149, Regent Street, will give every information as to price. (*T. W. Cowan*).—Messrs. Neighbour & Sons, 149, Regent Street, and 127, Holborn, will supply you with bees. The best books on the subject are "Taylor's Bee-keepers' Manual" and "Bee-keeping for the Many" (English), and Langstroth's "Hive and Honey-bee" and Quinby's "Mysteries of Bee-keeping" (American).

EXPERIMENTING WITH A YOUNG QUEEN (*S. A. Beintree*).—We fear for the result of your experiment. It is dangerous to trifle with virgins.

CANARIES (*Chemicus*).—We do not know the address of Mr. Roper who won the first prize for Buff Belgians at the Crystal Palace Show. "Canaries and British Finches," contains representations of all the principal kinds.

RABBIT-HUTCHES.—"J. G. C." says, Can you tell me where I can buy good Rabbit-hutches constructed upon the principle recommended in the "Rabbit-Book for the Many," at a moderate price?

LONDON MARKETS.—August 15

POULTRY.

The supply is moderate, and the trade almost nil. London is "out of town."

	s.	d.	s.	d.		s.	d.	s.	d.		
Fowls	2	6	to	3	0	Ducklings	1	9	to	2	0
Smaller do.	1	9	"	2	0	Rabbits	1	4	"	1	5
Chickens	1	4	"	1	8	Wild do.	0	8	"	0	9
Geese	5	0	"	5	6	Pigeons	0	8	"	0	9

WEEKLY CALENDAR.

Day of Week.	Day of Week.	AUGUST 23-29, 1864.	Average Temperature: near London.			Rain in last 37 years.	Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock before Sun.	Day of Year.
			Day.	Night.	Mean.								
23	Tu	Black Bryony flowers.	71.9	48.9	60.4	18	5 47	5 47	55 9	after.	21	2 19	236
24	W	St. Basil's flowers.	71.3	47.9	59.7	16	5 50	5 50	56 16	44 1	22	2 4	237
25	Th	Voltsbaw flowers.	71.5	50.7	61.1	13	5 50	5 50	57 14	44 2	23	1 47	238
26	F	PRINCE CONSORT BORN, 1820.	72.8	48.5	60.2	11	5 55	5 55	58 6	44 3	24	1 31	239
27	S	Beech turns yellow.	73.9	49.5	61.2	11	5 56	5 56	58 6	44 0	25	1 14	240
28	Sun	14 SUNDAY AFTER TRINITY.	73.9	49.5	61.3	10	5 56	5 56	58 6	44 1	26	0 58	241
29	M	Althaea fruticosa flowers.	71.6	48.0	59.8	14	6 0	6 0	59 12	45 5	27	0 38	242

From observations taken near London during the last thirty-seven years, the average day temperature of the week is 72.3°, and its night temperature 48.0°. The greatest heat was 89° on the 25th, 1859; and the lowest cold, 32°, on the 29th, 1850. The greatest fall of rain was 1.32 inch.

DRY WEATHER AND WATERING.



It has often been said that a certain amount of discontent is essential to happiness; and grumblers, even those habitually so, often enough live to a good old age, carrying with them the propensity they acquired in their youth: grumbling, therefore, like medicine, may be regarded as very good in its way, and may, doubtless, be quite as necessary. In the various avocations of life there is always something to grumble at if an object is looked for, and too many of us are apt to hunt after one. Gardeners complain in winter of its being too cold; by-and-by we find, perhaps, that the soil does not work well, and we complain then that the winter has not been cold enough; while in summer contrarieties are alike wished for and found fault with. At the present time (August), we think we are suffering extremely from want of water, while in all probability the crop of fruit we may have next year may owe its origin in a great measure to the dryness of the present period. Dry, bright, sunny weather is at most times grateful to vegetation, certainly so to that which is established some depth in the ground; and when we consider that in such is embraced a considerable portion of the vegetable kingdom we must not be too hasty in finding fault. It may be true that an equally good result would have followed if more rain had fallen; nevertheless, our ideas of what constitutes perfection in such matters are yet far from perfect. Let us, therefore, be thankful for the advantages a dry summer brings with it, and try our best to obviate some of the inconveniences arising from it in other ways.

That water forms an important constituent of every vegetable is well known and admitted; and products of rapid growth necessarily require much water, or they fail in arriving at perfection. Most of the products of the kitchen garden contain a large per-centage of water, and to obtain this, the plant sends its roots out foraging to a more distant locality if its ordinary domain be exhausted; but there is a distance beyond which the plant fails to extend its roots, and a more diminutive growth is the result. It is not, however, below the surface only that the plant seeks for nourishment, the humidity of the atmosphere and the night dews are alike grateful; and when these are less plentiful and there is less moisture in the soil, the less robust class of vegetation unquestionably suffers. Now, how to remedy this state of things has been for years a problem to the gardening world, but to say that it is solved in the present day would be wrong; for although something has been done, and very often indeed overdone (observe, I lay particular stress on this word), the result is not in any case

so satisfactory as where Nature does the work in her own way.

At the time at which I write (the middle of August), the appearance of vegetation and that of the atmosphere seem to point to a drier summer than we have had for several years. June, it is true, was not remarkably dry, but it was not a wet month; and the end of it, as well as the whole of July, and August up to the present time, has been exceedingly dry—so much so, that many sources from which water is usually obtained have failed completely; the larger streams and rivulets have rapidly subsided, and the smaller ones are, one after the other, drying up entirely. In many places where water would be an acceptable boon to vegetation it can scarcely be had in sufficient quantity to meet the everyday requirements of domestic use. Water, then, being so scarce, it behoves us to make the most we can of it; and unfortunately, where it is administered artificially in the way of supplying moisture to the roots of plants, it is often given in too great a quantity at one time or the reverse. It rarely happens that anybody watering a given plot of ground applies anything like the quantity that Nature would supply in the shape of rain; besides which, the advantages which a good watering gives are often lost from the soil being exposed to the sun, when that caking and hardening of the surface takes place which is alike injurious to vegetation and unsightly to the eye. All newly-planted surfaces should be covered, to prevent this caking and to retain the moisture; but it is my intention to advert rather to the quality of the water used than to the treatment of the soil after it has been applied.

Whatever may be the class of plants to which it may be necessary to give water, there cannot be a question that the moisture which Nature supplies in the shape of rain is most beneficial in every respect: passing through the air more or less rapidly, it absorbs certain gases, which are evidently essential to the well-being of the plants on which it falls, and the matters with which it is charged are alike grateful to the foliage of the plant and to its roots. Next to rain is water of a similar kind which has recently fallen and not been polluted by admixture with other substances, which rain water not unusually is when the roof on which it falls or the vessel receiving it presents anything which it can hold in solution. I have known a newly made tank turn water exceedingly hard and render it unfit for domestic use, and, of course, unfit for the requirements of plants also; while sometimes the roofs of certain buildings contain matters equally obnoxious. Mere soot arising from coals is not by any means the worst substance with which it comes in contact, although, except in certain cases, I am not aware of any good it does. Roofs and tanks are not the only causes of contamination in rain water, for sometimes in ponds when formed in clay containing a pernicious substance, this is imparted to the water. Clay is not by any means of so pure and innoxious a nature as is sometimes supposed; neither is sand, for I have seen a kind of coarse gritty substance that had nothing par-

ticularly poisonous in its appearance, and yet it would kill deep-rooted weeds when laid on a pavement or other place where they were. Of course, no one would think of using water coming in contact with a substance like this. Certain salts also abound in some soils, which render the water falling on them far from beneficial to vegetation. Therefore, taking all cases into consideration, it is perhaps more seldom than most people are aware that rain water is preserved in store in anything like its natural purity.

Although water from tanks, reservoirs, or ponds is sometimes impure, it is nevertheless most grateful when Nature denies us the refreshing influence of rain. Next to rain water is that from streams and brooks that has been duly exposed to the air, and which does not injure the vegetation among which it passes. River water is often turned to good account in irrigation; and happy are they who, in the dry scorching weather of the present season, have a stream sufficiently elevated above them to insure a supply for more urgent purposes. River water is, however, not always innocuous. Sometimes it is charged to an undue extent with iron, in which case the bed on which it runs is red with rust, and such water can only be safely administered to such plants as delight in a soil in which iron is found in abundance—as to *Rhododendrons*, for instance; but for domestic uses, I believe such water is by no means improper, and it is, perhaps, more wholesome than that containing chalky matter. It should, however, be more sparingly used amongst plants than water of another kind, if such can be had; although, perhaps, it is as good as the generality of well water, and much less hurtful than some of it is when used direct from its source.

Well water ought to be used very sparingly, and not at all for watering delicate plants, until it has been exposed to the atmosphere for a few days in any open vessel, the more shallow the better. It not unfrequently happens, however, as in the present season, that well or spring water is the only kind to be had, and that even that is far from plentiful: hence it becomes necessary to soften it by exposure before using, which, as above stated, is best done in shallow vessels, or, if in deeper and larger, then longer time will be required. In whichever way water is exposed, it is hardly necessary to remark that in periods like the present, with the dry arid atmosphere acting upon it, a considerable loss in quantity will take place: but this cannot be avoided; and as water must be had for the purpose of furnishing newly planted things with moisture to start with, every care should be taken to economise as much as can be what supply there is. A careless labourer, thinking that excess is liberality, will pour more water into the heart of a newly planted Broccoli than would serve a dozen, and repeat the same dose in a day or two, never thinking that the roots of the plants he is operating on are thus placed in a temperature like that of February, while the top is enduring tropical heat. It would certainly be better where practicable to use warmed water. If well water must be used let it be heated to the temperature of the atmosphere, and, after watering a plant with it once, let the latter be surrounded with dead moss, leaf mould, or very short dung for a time to keep in the moisture, which ought not to be allowed to escape.

Although the present season will call into use all the contrivances that can be had to assist in retaining moisture in the ground and saving water, and potted plants will not be so much overwatered as they sometimes are, yet I expect when an impartial retrospect is taken of the season that there will be found many things to be thankful for, and as a whole that it may be pronounced a beneficial season, not abundant in vegetables perhaps, but fruits will be plentiful, and the condition of the trees for another year promising. Some weather prophets that I hear of have taken up another theme, and are predicting that we are to have no more Potato disease, there being none this season, and they have hopes of its being eradicated. Certainly the dry weather has preserved the Potato crop from disease so far, and from it I have good hopes of the disease not making its appearance in the crop of 1864.

I may add, in conclusion, that although water is an essential element for vegetation, yet when applied by other than natural means it loses half its value. It is best to imitate Nature, and when it appears that a good watering is required, let it be done when rain is falling, assuming, of

course, that the quantity of the latter is not likely to be sufficient. Shading the ground by some artificial means is also beneficial, and at the same time not allowing any crops that are at all likely to withdraw nourishment from the ground to remain on it a day longer than necessary. The same rule holds good with regard to thinning crops; and in fact anything and everything that will tend to retain moisture in the ground and obviate the necessity of watering ought to be taken advantage of, so that the latter need only be resorted to when it can no longer be done without. J. Rosson.

EXPERIENCES OF A COUNTRY PARSON.

“— Delectando pariterque monendo.”

I SUCCEEDED to the livings of Rushton and Rawston, adjoining parishes, in 1852. They were united, not at my request, by act of Parliament. I am not a vicar, as stated by friend “D.,” but a pluralist Rector, the last, I believe, that was ever made. The churches are about 800 yards apart. Both are small and in good repair. The Rushton church, newly done up before I came, has more marks of antiquity than any other church in the diocese.

To Rushton, then, I came in the August of 1852. I had been accustomed to farm a little at Moor Critchill when curate, and also as tenant of my kind friend Mr. Sturt. I served the church, since rebuilt in magnificent style at Mr. Sturt's own expense. The new church stands on the site of the old church, in which George IV. worshipped when he resided at Critchill. As my two glebes are the keys of my patron's farm, the only one, at Rawston, and of my friend Mr. Sturt's farm at Rushton, I did not think it right to take the land into my own hands, more especially as it would have greatly inconvenienced the tenants. I had lived long enough to know that when a sacrifice is to be made the clergyman is the proper man to make it, and that, however distasteful at the time, in the end he will be a gainer, in the satisfaction he will feel in not having disobliged those whom he has to instruct.

Having been accustomed to “vegetation” all my life, for two years I felt like a fish out of water. What was to be done? What shall I, in leisure time, turn my hand to? At last I said to myself, “I will have a ‘go’ at gardening.” Here, however, a difficulty met me. The old gardener had been here twenty-eight years, and had fixed his tap roots deep down into the soil. We all know that a gardener likes to have all the farmyard manure, called here “spit dung” (preterperfect of spade), and that he does not like giving up ground; still less does he like “master” trying his hand at things in which he has signally failed for twenty-eight years. His name was Elias Maidment, commonly called “Lias” here, and “sleeps well,” I believe, deeply lamented by the parson and all the parishioners. I buried him in 1856 under a lofty Chinese Arbor Vitæ in Rushton churchyard, and put a noble Portland stone at his head, with the names of his past employers. These words may be seen on the slab:—

“An honest man's the noblest work of God.”

“I pray thee let me go over, and see the good land that is beyond Jordan, that goodly mountain, and Lebanon.”—(Deut. iii. 25). From this text I preached his funeral sermon.

We all know that gardeners like having their own way. As to arguing with some of them, that is lost time; you might as well argue with the pump at Aldgate.

In 1856 my brother was high sheriff and I was the chaplain. Before starting I went down into the garden and found Elias pruning the Gooseberry bushes, and shouting at real or imaginary bullfinches. He had had a bad sore throat for some days. The easterly wind was piercing; so I said, “Lias, go home, and get into bed, and have some tea; for if this easterly wind catches you by the throat it will bring on inflammation of the lungs, and in your weak state you will be gone quickly.” “Oh no, that's no odds,” was the reply. I went my way. After hearing sentence of death passed on Hannah Brown for the murder of her husband, which greatly saddened my brother and myself, I returned and found Lias in the last stage of inflammation of the lungs. Venous congestion had set in, and he was the colour of a copper-coloured Indian. I had barely time to say a

short prayer and call his wife up to my house, where he died (having received every attention), when "Lo! he was gone."

This leads me back to answer the question, "What shall I turn my hand to?" I said to Lias (in 1854), "Could you not give me up that bit of ground, as we have had no Strawberries for two years, and let me try my hand?" "Oh, that's no use. I have been here twenty-eight years and could never grow them; the soil don't suit 'em. It's impossible! But there, master can please himself." "Impossible," said I, "is not English, and I will have a 'go.'"

Though the soil is mixed with chalk, and rests on chalk, I have never found any "impossibility" whatever. I have had immense crops this season. The Frogmore Pines were as big as Myatt's Surprise.

So far as regards Strawberries. The following relates to Peach trees, and is somewhat amusing. I could never beat into Lias's head that without protection by sheets in such a situation it would be impossible to grow Peaches. Before, however, I come to protection I have painful operations to describe.

"Lias," said I one day to him (he had a comic face, and his eyes nearly came out of his head), this is St. Thomas's Hospital. These patients must undergo amputation. Get the saw and hatchet, and the spade and pickaxe. I am going to cut these old naked trees down, and cut off all their perpendicular roots and make new trees of them. It will be a bloody job; hemorrhage may set in. Let's have a pint of beer each, for it's nervous work." The beer being disposed of I said, "Now don't be unbelieving. Job says, 'There is hope of a tree if it is cut down that it will sprout again.'" "Sprout again!" said he; "if ever they sprouts again I'm a Dutchman!" "Phoo!" said I, "prepare for operations. I am Sir B—, you are Stiggins the operator." "Oh, well," said he, resignedly, "what must be must be!" "Now," said I, "don't be nervous; give a decisive blow right through the 'crurum tenuis,' avoiding the 'femoral artery.'" He gave tremendous chops, bordering on the spiteful: and, after the limbs toppled down he burst into a loud fit of laughter and exclaimed, "I'm blest if that aint the *cruel tenuis*; and the *female artery*," he added, "with a vengeance." "Well," said I, "Stiggins, you shall have half-a-crown."—(N.B., no oil is so effective as palm oil.) I got him after this to cut the other two trees down, and also to cut off all their strong perpendicular roots, some of which were as thick as my wrist, and also to cut off the superficial roots in a radius of 30 inches round the stump. The ground was then renewed; and when the trees reached the top of the nine-foot wall and touched each other, I gathered, the first year of sheet-covering, over a thousand Peaches. I never before had as much from the whole wall as would fill my hat. From that time to this (eight years, including this), I shall, after taking its present fine crop of 560 Peaches, have gathered over 4000 Peaches, or an annual average of 500 Peaches for eight consecutive years! The trees are beautiful for strength, for new wood, foliage, and crops. The 560 Peaches now on the trees (I believe Royal Georges), are swelling fast and reddening. Since I have been writing this article two visitors, hearing of them, have called to see them, and expressed wonder and admiration. I have forgotten the year they were cut down. The old man died, I believe, in the March preceding the landing of over 1000. This was an unwise crop, as in the next year the trees only bore 197 from being overcropped. I am feeding the present heavy crop with strong beer grounds over the whole surface of the ground, which I never move, washed in with great inundations of water. They are copiously syringed every day at eleven o'clock to cool the wall, to refresh the wood and clean the leaves, and to keep down pests. Suffer a few words in conclusion.

1. Peach trees must be fed. What you take out must be put back. Every third year renew the surface with fresh maiden mould. The Peach trees of England die from too much disbudbing, starvation, and neglect of the general health of the tree in winter and summer.

2. The leaves, when first breaking, are as tender as the blossoms. They must be protected by sheets or glass. Cold piercing winds injure the leaves, and ill health sets in. I had only twelve blistered leaves last year—only four this year.

3. The Peaches should be thinned as soon as you can feel

the little Peach in its sheath. They should be thinned at three times. 1823 were first taken off this year from the three trees, and 847 left on. There are now 560. These will come to perfection.

4. Peaches drop their fruit from immaturity of wood, previous over-cropping, want of water, especially at stoning time, over-cropping, over-heating of the walls, and from starvation.

5. You must, till frosts are over, keep the leaves and blossoms dry.

6. Keep the wood as close at home as you can, and beware of letting the trees become bare at the base and centre. Spur the fore-wood, and keep the rest of the tree like a shrubby *Calceolaria*. Winter may be severe: therefore keep on plenty of wood to select from. I will be answerable next year to put a Peach wherever the reader will make a chalk mark.—W. F. RADCLIFFE, *Tarrent Bushton*.

FLOWER SHOWS.

If the old saying that "too many cooks spoil the broth" be correct, then has the stew of the Royal Horticultural Society a very fair prospect of being spoiled—no, that would not be correct considering the condition in which things are at South Kensington, but of being made utterly useless; but the state of affairs there has opened up a wider subject; and the whole question of flower shows, their present condition, and their future improvement, have come upon the carpet. Having had some little experience in this matter, I venture, even although Sir Joseph Paxton and others have written upon it, to suggest a few things, not so much by way of alteration, but to check, if it may be, any tendency towards an ultra-democratic movement in the matter, and to throw a little conservative element into the question. I do not pretend to speak with authority; but it is open to every one who takes the trouble of observing to give the result of his observations, even though they may be those that have passed through the minds of many besides himself, and may not, therefore, have the appearance even of novelty.

The first question that meets us is, What is the object of a flower show? Is it to afford an agreeable promenade for the upper classes of society? Is it to replenish the coffers of a treasury exhausted by other outgoings? Is it to put money into the pockets of a few large growers who are sure to exhibit wherever they can? I have no objection to any or all of these views of a flower show. I delight to see the array of beauty and fashion that one is always sure to see at a metropolitan show. I have no objection to a society making money by flower shows, if it can be done, and I think our great growers deserving of all encouragement, although I do not for a moment believe that they are great gainers by their prizes; nay, I feel confident were they to put together the expense and trouble of growing the plants, and the expense of sending them to the Show, that they are at a loss. But I contend that none of these are the primary objects of a horticultural exhibition. It is to encourage gardening and gardeners, to show what skill, and energy, and perseverance can do, and to enable those who succeed in the various branches of the science to show the results of their labours; and I believe that where a society keeps this prominently before itself it is best fulfilling the objects for which it professes to work.

I know that it is objected to this that the very magnitude of the results obtained renders people hopeless of ever attaining a like degree of perfection. A gentleman sees, for example, some of Mr. Henderson's or Mr. Meredith's wonderful Grapes, and he contrasts them with his own miserable bunches, and he wants to know why he cannot have as good. Well, perhaps Robinson or Jones has not seen the said Grapes, but he hears of their size and beauty; and if he be a wise man he will tell his employer, "I think, sir, you would hardly like to incur the expense that has been entailed to procure this fruit; but if you do I am quite ready to try my best." Well, he does not reach the standard set; but he inquires the method of culture, gets Thomson on the Vine or some such book, and his viney bears a totally different appearance. The same holds good with regard to flowers. Take Mr. Bailey's Pelargoniums. It would never

suit a grower of small means to attempt such plants—a few of them would soon fill a house; but is there any one who has ever seen them that does not, when he is growing his plants, have them in his mind, and endeavour to improve the appearance of his plants by adhering to this model? Far, very far behind they are, but the exhibition plants have acted as the stimulus, and he is all the better for having seen them. Where, then, a society has the means within its reach, there flower shows ought to be encouraged and made to embrace within their limits the various branches of in-door and out-door gardening. The distinction that is often made between stove and greenhouse plants and florists' flowers, and that to the injury of the latter, is, I am sure, a mistake; and it is a gratifying thing that at the last great show of the Royal Horticultural Society the Princess of Wales paid most attention to the cut flowers, and requested Mr. Turner of Slough, and Mr. W. Paul, to send her their Roses, &c., which were accordingly forwarded to Marlborough House. This by the way.

I return to the statement I have made, that the one object to be kept in view is the advancement of horticulture; and if a society be honest in that, although it may make mistakes and oftentimes fail, yet I believe it will be looked kindly upon by all who value the benefits of gardening. And, as we look back on the last thirty years, who is there that does not see the immense advance in horticulture—an advance which I for one do not hesitate to lay entirely to the floral exhibitions held in London and other places? I hope to resume this subject, one of so much importance, next week.—D., Deal.

GREENHOUSE BUILDING.

I wish to build a span-roofed greenhouse (not a vinery), the length to be about 30 feet, would you kindly tell me what would be a suitable width, having reference to the stands for flowers, borders for plants and climbers, and walk for the ladies? What would be the best mode of heating it, and how can the furnace, boiler, and outlet for smoke be managed so as not to disfigure the structure, as it is to stand in the middle of a grass garden detached from every other building? Do you recommend the house to run north and south or east and west? Lastly, what might such a house be likely to cost built in a plain inexpensive manner within ten miles of London, Dublin, or Cork for example?

I am open to any suggestion as to size and style of building, heating, &c., and shall be much obliged for such.—J. C., a Subscriber.

[The matter has been treated on largely in previous volumes, but to oblige you we will give a few hints that may be useful.]

First, For a span-roofed house 30 feet long, the necessary breadth, to admit of borders for creepers, stands for flowers, and walking room for ladies, must depend on the internal arrangements. When the fashions change 3 feet might seem a suitable pathway—at present the walks ought to be at least from 3½ to 4 feet wide, and even then would be of little use for such dresses as we have seen sweeping an eight-foot walk from side to side. Now, for an economical house, you could hardly do better than adopt something of the same style as we described as existing at Kimpton Hoo (vol. x., page 56). Supposing the house to be 12 feet wide, we would make the height of the apex 8 or 9 feet, and the height at the sides, half glass, from 5 to 6 feet, ventilation being effected either by glass, or by openings in the wall below it. No better plan for ventilation at the top could be given than by having a double ridge-board, a space of 9 or 10 inches between them, and these supplied with ventilators on pivots. This would require an open cowl over them to prevent the wet entering. The next best plan would be to have a double ridge-board and a cowl coping, which could be raised by a lever. We are supposing that in this house the walk is down the middle, and 4 feet in width, which would leave you room for 4 feet of stage on each side. That stage might be a flat table of the necessary height, or slope from the side walls to the walk as at Kimpton Hoo, or the slope might be given without any stage at all by placing rather tall plants at the sides, and the dwarfest next the pathway. This makes a capital arrangement, and the beauty

of it is, that almost every plant comes under the eye, instead of above it as in most arrangements. We ourselves have to place plants to be looked up to, but these is not then half the charm that is enjoyed when you look down on them. Some years ago we described the gorgeous effect produced by the masses of bloom in the conservatory at Wytham Park (then under the care of our able coadjutor, Mr. David Thomson) when looked at chiefly downwards from the drawing-room glass door. Mr. Cox, at Kimpton Hoo, manages to obtain a good deal of the same effect in his little greenhouse. The plants at the sides, being the highest, act as a background, and the lowest close to your feet bring all under the sweep of the eye, without straining it to look up. This, we think, would be your simplest arrangement, and, for a small house, perhaps the most effective. Whether with a flat stage or sloping stage or no stage at all, there would be ample room below the stages or below the pots, for a border for creepers, and it would be as well, perhaps, if each of them were planted in a wooden or brick box—in either case, the box need never be seen; but planting thus, instead of in a made border, would enable you to change your climbers and replace them without interfering with those that pleased you.

Considering the simplicity of details, ease of ventilation, &c., we do not think you could better this; but if you wished to have a central stage to stand opposite the doorway at each end, and a pathway round it, then your house would require to be 10 or 12 feet in height at the apex or ridge, 6 feet at the sides, and from 16 to 17 feet in width, and we would arrange it thus: In the centre, a platform 7 feet in width, and 8 feet from the ground, a pathway round it of 3½ feet in width, and a stage all round the sides and ends, except where the door is, this stage being 38 inches wide and 30 or 35 inches from the floor. Such a house would give you much storage-room beneath the stages, and the skirts of the paths might be edged with Mosses and Ferns. Such a house, however, would cost much more than the more simple one, and we question if on the whole it would look better. In both cases the path could be partly occupied with dwarf plants when room is a matter of importance, and these could be cleared away when they would incommode ladies and their extended dresses. We state this because such little bothouses soon become crammed and their fair mistresses will not dislike wrapping their skirts closely in preference to injuring their favourite plants.

Secondly, As to the best mode of heating. For such an arrangement as the last, the best mode would be by hot water, and more especially if a heat of from 50° to 55° and upwards were wanted in winter. For the simple plan first proposed, and where a medium heat of 40° to 45° in winter would be deemed sufficient, we would decidedly for such a single house adopt the flue system. We would carry that flue beneath the central pathway, either a single wide one of 15 or 16 inches, going from the furnace to the other end, or a double flue of 9 inches, outside measure, going and returning; but in either case the flue should be deep enough to permit of a thin covering of tiles, and then the top of the flue to be of tiles, flagstones, or whatever material of a conducting character formed the pathway. One advantage of this plan would be that in cold and damp days in winter, when the fire was burning, the ladies might always walk in the greenhouse with the certainty of having, not damp or cold, but a mild heated medium beneath their feet. For simplicity and economy in such a house, to be kept temperate merely in severe weather, we would prefer the flue to any other mode of heating; and if a single flue through the house we would build the first 10 feet with brick on bed, instead of brick on edge. If hot water, with its greater expense for fuel, &c., were resolved on, any middle or small-sized saddle-back or conical boiler will do; the simpler the construction the better.

Thirdly, As the building is to stand in the centre of a grass garden, how least to disfigure the structure with furnace, smoke-outlet, &c. Well then! in the first place we would not disfigure the place with any appearance of a furnace or stokehole. If the ground slopes at all we would have the furnace at the lowest end, and this would be best if you adopted a single wide flue or hot water. If on the level, it would not matter at which end the furnace were placed. Now, as you are not tied to 30 feet, but would wish to be pretty near it, we would have that length for the house

proper; but at the most appropriate end we would have some 6 or 10 feet additional as a lobby, looking the same as the rest of the house outside, but with a glass division and doorway in it, separating it from the other part. In one side of this lobby we would sink our stokehole, either for sea or hot water, and this we would cover with a wooden door, and over this you might set a table for plants, to be easily moved into the passage when the fire wanted looking to. This would effectually hide all appearance of a stokehole and furnace, unless to the initiated, and many things could be kept in this furnace-lobby in winter. In summer, when no fires were wanted, it would look like the rest of the house. Now, as to the smoke-outlet, supposing that was wanted merely at one end, still, for uniformity, we would have an ornamental iron shaft, or one of terra cotta, or earthenware, somewhat ornamental, fixed at each end, and the pair would so balance as to do away with any idea of ugliness. They might also be connected with breaks and juttings-out along the ridge-board, so that the smoke column and its balancing neighbour would come in as necessary adjuncts. As for the smoke itself, except when lighting the fire, little smoke need be seen if broken coke is used, and a little air is caused to play over the fuel in the furnace. Of course, if smoky coals are used, there will be more difficulty in disposing of the smoke. By such means as indicated the chimney, or rather chimneys, will be ornamental rather than otherwise. Were it not for being so detached from any other building, no smoke at all need be seen. For a more extended greenhouse it might, in similar circumstances, be desirable to carry the smoke in a tunnel to the nearest chimney of the establishment. What we suggest has reference to the circumstances you describe, keeping economy, efficiency, and graceful uniformity in view. Many greenhouses are disfigured because they look like a pig with one ear; the other ear, or the appearance of the double ornamental chimney, would have pleased the most fastidious taste, especially of those who are influenced by the first appearance, and not by stern questions of utility. Either iron, somewhat ornamental, or earthenware tubes, not less than 9 inches in diameter, should be used as smoke-vents in such a house.

Fourthly, We would prefer such a house to stand north and south, instead of east and west, as the full morning and afternoon sun can thus be taken advantage of, and the hottest sun will strike the house transversely. The other direction will, however, do very well, and it will have one advantage standing east and west, that only the south side of the span will require shading. Mr. Cox does this efficiently at Hampton Hoe by thin calico curtains inside, fixed by rings or pivots, which remain on in hot weather in summer, and can be easily taken off and replaced.

Fifthly and lastly, As regards expense we would rather not touch on it. That will be a matter for the designer and the builder when the plan is decided on. The more work, the more money; the more ornament, the more expense. You can easily ascertain what the glass would cost at 2d. per foot, the expense of sash-bar rafters, if the roof is to be fixed, which should be at least 34 inches deep by 1½ inch across, also, the expense of glazing, the cost of walls per foot or per yard. The having a fixed roof will reduce the expenses very much, but then you cannot move the house without taking it to pieces. Making the roof in sashes will pretty well double the expense. We have had particulars of the five-pound curate's greenhouse, and the cheap wood-and-glass houses of Mr. Rivers, and our own experience leads us to the conclusion that that great gardener has not in cheapness exaggerated a jot. But beyond these simple structures, everything in the shape of durability and extra elegance must be paid for. The best plan for you to adopt after fixing on a plan, is to have everything done by a respectable builder when you have settled on the price. If you have a stone-mason or a bricklayer to employ, then a carpenter, then a glazier and painter, and then a hot-water man, you must expect to pay not merely for the workmanship, but for the superintendence of the work being done in each department. Not being in the trade we would rather not give prices; as, when we have ventured on this ground, and found ourselves pretty correct, some half dozen of letters would come, stating that we would ruin the trade, and another half dozen telling us the writers would willingly undertake such work at

a lower figure than we stated. Still the alteration of circumstances is so great, and the least departure from the simply useful so expensive, that it is much better that every gentleman should make an agreement for himself. Let him, however, well consider the matter, and have scarcely any deviations from the plan for which the estimate is given, if rigid economy is his object, as for each deviation it is only right that he should pay.—R. F.]

ROYAL HORTICULTURAL SOCIETY.

AUGUST 16TH.

FLORAL COMMITTEE.—This was one of the most interesting meetings of the season. Subjects for examination were unusually numerous. Mr. Chater's grand spikes of seedling Hollyhocks were in themselves a splendid exhibition. Mr. Chater had brought some of these seedlings on the previous Tuesday, under the idea that it was one of the days for the Committee's meeting. By the aid of a Sub-Committee and the Chairman, who were summoned to a special meeting for another purpose on that day, certificates were awarded, which will be noticed in the following report:—

The Rev. E. Hawke, Willingham Rectory, sent out flowers of seedling Hollyhocks Willingham Defiance, light rose, bright colour—first-class certificate; Gladiator, dark maroon or ruby—first-class certificate; Cavalier, a carmine rose—second-class certificate. These were all very promising flowers. Mr. Payer, nurseryman, Folkestone, sent four seedling Pelargoniums—Charles Payer, Mrs. A. Payer, Giant Golden Chain, Folkestonii, far behind the class of flowers of the present day. Mr. Norford, Brompton, sent Verbena Purple Prince, a dwarf-habited plant, with very small purple truss; Mr. Turner, Slough, seedling Verbena Princess of Wales, very delicate white ground, with pale rosy stripes, by no means an effective flower; also one flower of a promising Hollyhock, Yellow Perfection. Mr. Bowie, Clapham Rise, exhibited twenty seedling Gladioli scarcely in bloom, nor did there appear anything extra or novel in them. Mr. Cooling, Bath, had a very pretty striped seedling Verbena, Annie, the best striped variety we have seen, pale pinkish ground, with broad bright rose stripe, which received a second-class certificate; and Tropaeolum Fire Queen, not distinct from King of Tom Thumbs. Mr. Bland, "Star and Garter," Richmond, sent a double Fuchsia, Chamer, deficient in colour as well as form; and Mr. Perkins, Coventry, Verbena Earl of Aylesford, bright scarlet, but inferior in every way to Lord Leigh and Foxhunter.

Mr. Chater, Saffron Walden, exhibited many superb spikes of seedling Hollyhocks, the only and proper way of showing their merits; for it is much more difficult to show a spike of good flowers than three good flowers selected from a spike. Spikes of several of the seedlings sent on the 9th were again brought for inspection. The following received first-class certificates:—Decision, a remarkably fine flower, buff, shaded with salmon; Rev. E. Hawke, salmon, suffused with rose, a very fine flower; Chairman, deeply-shaded cerise; Fanny Chater, a first-rate flower, rose tinted with carmine; Acme, a seedling of 1863, had received a first-class certificate; James Allen, purplish puce, a most useful colour; Cygnet, the finest white ever exhibited. Second-class certificates were awarded to Competitor, rosy lilac; Othello, shaded maroon; Fairest of the Fair, deep rose. Two other seedlings—Rev. H. Dombrain, a salmon rose; and Cyrus, pale orange—were not noticed.

Mr. Chater also exhibited for the Rev. E. Hawke a spike of a seedling named Albion, a white flower faintly tinged with lemon, for which a second-class certificate was awarded.

Among Mr. Chater's cut flowers were Hercules, a fine full flower, yellow, shaded with fawn—first-class certificate; Rev. Joshua Dix, bright red, very fine in texture and colour, a seedling of 1863—first-class certificate; and among other seedlings we noticed Zeno, an orange buff; Millicent, a bright rose; Sanspareil, carmine rose; and Rubra purpurea. Such a collection of seedlings no individual has ever exhibited in one day; Mr. Chater must feel gratified at his success. In a collection of forty-eight cut flowers which received a special certificate were Peeress, Countess Russell, Joshua Clark, Erebus, Royal Scarlet, Lady Dacres, Lady Paxton, Pericles, Princess, Invincible, Princess of Wales,

Glory of Walden, *Rosea pallida*, and many other first-rate varieties.

Mr. Porter exhibited eight seedling Hollyhocks, among which was Volunteer Improved, a nice compact dark ruby flower, and a second-class certificate was awarded for it. Messrs. Downie, Laird, & Laing sent seven seedling Hollyhocks. Some of these were very promising flowers, but not in a condition for their merits to be judged, having suffered much injury from the thrips. Stanstead Hero, a very fine flower, and others, will doubtless take a high position when seen under more favourable circumstances. A special certificate was awarded to Messrs. Downie & Co. for their collection of cut flowers, some of which were first-rate. We noticed Stanstead Rival, Lady Fuller, Joshua Clark, Charles Eyre, Scarlet Gem, Lady de Veaux, Orange Perfection, &c. Messrs. Downie & Co. also sent two fine specimens of *Amaryllis reticulata* superba, one bearing six and the other five beautiful flowers. This plant has been in cultivation for many years.

Mr. C. J. Perry brought five seedling Verbenas, two of which, Glowworm and Snowball, received second-class certificates at the last meeting. The others were Charles Turner, a very superb flower, large truss, bluish ground, with very large rosy purple eye, the finest flower in its class—first-class certificate; Lilac King, a pale lavender, fine truss, and very sweet-scented, dark eye; and Queen of the Pinks. A collection of twenty-four varieties also came from Mr. Perry, and it received a well-merited special certificate. The flowers were perfect in size, form, and colour. Among them were Purity, Miss Harvey, Wonderful, Nemesis, Startler, Emperor, Magnificans, L'Avenir de Ballent, Modesty, &c. Mr. Perry also brought Scarlet Pelargonium Glowworm, pale orange scarlet, small truss. Mr. Bull contributed Verbena Otto of Roses, a flower remarkable for its perfume; Verbena Merry Maid, bright cherry, a pleasing colour for bedding purposes; also a collection of Italian striped Verbenas. The Rev. R. H. Charlesley, Iffley, Oxford, exhibited cut specimens of Verbena Una, a fine flower, but not sufficiently distinct from other varieties; and Mr. Keynes, Salisbury, several seedling Dahlias, some of which were very promising flowers. Among these were Edward Spary, dark plum, first-rate form—first-class certificate; John Salter, buff ground striped with scarlet, fine form—second-class certificate; Striped Perfection, a decided improvement in its class, dark maroon on a pale purplish ground—second-class certificate; George Rawlings, purplish puce—second-class certificate; Lady Maude Herbert, a very beautiful flower, pale lemon tipped with carmine—first-class certificate; and Hamlet, a dull red or velvety crimson, fine form—second-class certificate.

Mr. Eyles brought from the Society's Garden, Chiswick, specimens of plants recently sent home by Mr. Weir, three of which received first-class certificates—viz., a species of Anthurium, from New Grenada, a very handsome-foliaged plant of the *Caladium* tribe; *Peperomia* species, and *Peperomia arifolia*; also a new *Dieffenbachia*, not sufficiently grown to decide upon its merits, excepting that it is very distinct from any other known *Dieffenbachia*.

A fine plant of *Peristeria elata*, presented some time since by Mr. Bateman to the Society, and grown in the gardens attracted much attention. It is a very singular and beautiful Orchid, known in its own country as the "Dove" plant, the centre of each flower most perfectly resembling a white dove.

FRUIT COMMITTEE.—H. G. Bohn, Esq., in the chair. Mr. John Keynes, of Salisbury, sent three bunches of a new Grape, introduced from Smyrna. The bunches are large and long, and, considering they were grown on a pot Vine, give evidence that when planted out the plant will yield immense bunches. The berries are large, ovate, with a thin, tough, white skin, and crackling flesh. They were not quite ripe, and the flavour was evidently not yet developed, so Mr. Keynes was requested to send it later in the season. Mr. Francis Dancer, of Little Sutton, sent a basket of very large Lord Suffield Apples, one of the largest and most valuable early culinary Apples. A seedling Apple was sent by Mr. Cooling, nurseryman, Bath, called Bailbrook Seedling. It was raised at Bailbrook, Batheaston, near Bath, and belongs to the Irish Peach class, a beautiful and very early dessert Apple, tender-fleshed, with a balsamic flavour. The Committee recommended it as worthy of cultivation as a handsome, early, dessert Apple, ripe in the beginning of

August; but the fruit exhibited on the 16th of August was considerably overripe, having already become mellow.

A seedling Plum was received from Mr. Thomas Ingram, of Frogmore. It is medium sized, mottled with purple and yellow. Flesh yellow, melting, sweet, and richly flavoured. The Committee asked that it might be sent again. Mr. Cooling, of Bath, sent a seedling Kidney Potato of a fine purple colour; but as the Committee could form no judgment beyond the appearance, Mr. Cooling was requested to send tubers to the garden for trial.

EFFECT OF GALVANISED NETTING ON FLOWERS.

A few days since a lady in Devonshire drew my attention to what appeared to both of us a very curious circumstance with reference to the effect produced by galvanised wire netting, when placed round a bed of flowers.

The bed in question contains Carnations—seedlings, which would, properly, come into bloom this summer—but, strange to say, the plants commenced blooming in the month of April, and have continued to produce a great quantity of flowers up to this time. This appears to be contrary to the nature of the plant; and, indeed, a bed of the same kind of plants close at hand, but without the wire netting, has only bloomed in the regular season. Those within the netting have almost, and in a few cases quite, exhausted themselves with this apparently forced blooming, having made little or no grass, and many plants having actually died. The netting is, I think, 18 inches or 2 feet high, and is placed there to keep off rabbits.

Can any of your practical readers give us any account of similar experiences, or can those who may possess scientific information assign any cause for the phenomenon?—DECIDEDLY PUZZLED.

A CHEAP GREENHOUSE AND STOVE.

By any one who has a mechanical turn, a greenhouse or stove can be erected and heated at a less cost than one would think. Having all along had a fancy for the cultivation of plants in-doors, I have tried many a shift, but with poor luck, and the expense of putting up a house to answer my wants was, I thought, out of the question. However, in one of our newspapers, I observed the advertisement of a carpenter who wished to dispose of a lot of window-sashes, sound in glass and wood. These I inspected, and finding them suitable, closed with him at 1s. 9d. a-piece for the lot. I immediately set to work, and made the frame of a size to fit my sashes, and in a very short time the whole was completed, painted, and made watertight. I may mention, that over the junction between the two sashes on the roof, I nailed roofing felt cut in strips, which costs a mere trifle, and the sash-bars were cut with a saw to allow the water to run freely away. Although I wield the pen as an occupation, still I can also handle the saw and plane, and the use of these one can easily acquire by a little practice. I have seldom met with an amateur gardener who could not handle them to some extent.

Heating was the next difficulty. I first tried steam, as I was in possession of a small boiler for driving an engine in connection with a turning lathe which I had. This would not do. Steam could not be kept up all night. A stove was next tried. This would have done well enough could I have superintended it personally, but I had to be at business all day, and it was by no means pleasant to come home and find it at a cherry red heat outside. It was keeping up the temperature with a vengeance; and then the dust from the clinkers, even with the greatest care, would fly about. My patience was at last exhausted, so I resolved to adopt the hot-water system, and purchased one of Riddell's stoves, with a coil of one-inch piping inside. Each end of the coil is brought out of the casing and screwed to fit a coupling. To this I added a foot more of tubing, and connected them with the flow and return pipes going round the house by tapered oak plugs driven up with red lead into the four-inch pipes, and a hole bored in the centre, admitted the screwed end of the one-inch tubing coming from the stove. A better

or cheaper joint could not be had, as it has been in use for more than a year, and is as good and free from leakage as the day it was first put in.

For fuel I use what are called gas cinders, which are the burnt gas coal that is drawn from the retorts, and which can be bought for about 5s. a-cartload. If a strong fire is desired, it will yield that to perfection by giving draught, and on the other hand nothing will smoulder so long with so little air. As a proof of this I refer to my note-book, and find that for fully more than a month my fire was never re-kindled, and then it was only owing to my absence from home that it went out. It may interest some to know how this is done. You are aware that in these stoves of Riddell's the fuel is put in by a circular aperture (fitted with a cover and made tight with silver sand), in the top of the stove. Now so soon as I have the heat up, and a clear fire, I open the cover, and fill up the stove nearly to the top with the cinders, close the ash-pit and front doors (the latter used for lighting), and then plaster these all over with wet ashes. Perhaps some one may be able to explain better than I can the reason why the fire burns at all. In the morning I open the small front door, and with a bent piece of iron remove all the burnt fuel till I see the clear fire. I then open the top cover and press the unburnt fuel down to the furnace-grate, and close up as formerly. If this is done I can insure any one having little trouble in the management of that class of stoves. I may add that this treatment will not do with common coal, as it requires a fair supply of air to yield the required heat, or even to smoulder. I can speak from experience on this.

My house is about 24 feet long, and about 8 wide, divided into a stove and greenhouse. The sashes cost me, I think, including all the wood I required, £3 10s.; hot-water stove, £4 10s.; pipes, £1. I find common rain-water pipes answer perfectly well, and being thinner than others heat more rapidly. I coat them with common blacklead dissolved in water to the consistency of paint, and laid on with a brush or piece of flannel; one pennyworth of blacklead will go a long way. The joints of the pipes are filled in with hemp and redlead.

You will see the cost was £9, but, of course, my time was a good deal occupied after business hours, but it was altogether a labour of love on the part of—AN AMATEUR MECHANIC.

[The smallness of the cost is entirely owing to the bargain you made, obtaining the articles much below cost price, and thus it hardly forms a guide for others. When all the materials have to be purchased at their fair value, the fixed roof will always be the cheapest, and sashes will be dispensed with; but then for tenants such houses are not easily moveable. We consider you deserve credit for the way in which you have made the best of the materials. We have no doubt that with personal attention you would have succeeded in heating to your satisfaction, either with an iron or a brick stove; but all these matters require care. We are obliged by your experience of Riddell's stove. It will answer better for securing the requisite temperature in the two divisions of your house. We believe every word you say about the fuel. We presume that what you call gas cinders are not the burnt gas coal drawn from the retorts; but such, or coke, used again once for heating the retorts, and then called cinders. Such are generally in small pieces, possess good heating power in furnaces, and emit little smoke. We are obliged by all your details.]

HOTHOUSE NEAR THE SEA.

I AM thinking of building a hothouse on the slope of a hill, facing south-east, but the piece of ground is within 200 yards of the sea, and is exposed to winds coming from the south and east. It is entirely sheltered from the north by the hill. My object in having a hothouse is to make it remunerative as well as pleasant. Now what perplexes me is, whether the sea breeze is much colder than the land breeze, and whether the house would be very much more expensive to heat on that account. I am living in Jersey, where it happens that there is not one hothouse built close to the shore, and therefore there is no one to give me the results of his experience. Will you, therefore, kindly

offer me a little advice on the subject? It would be a serious loss for me to build one, and then to find that the extra expense for fuel would, in a great measure, swallow up all the profits. Coke is 7s. a-load, coals 18s. per ton. — PERPLEXITY.

[We should not like to advise you in the circumstances without knowing how far the sea vapours and spray may be carried in your exposed position. It would be a serious thing to build a house for profit in such an exposed position, and some stormy night or day to find the salt spray coming into your house. Of course much might be done to prevent that, by close glazing, and ventilating chiefly on the northern side, or that not exposed from the sea. This would be our chief reason for delaying and making some experiments. The cost of the fuel need form no drawback—that is if you can take it easily to the place. The sea breeze in the position will be warm rather than otherwise. We have known hothouses do well at a shorter distance from the sea than you are, but then a bluff headland intercepted the spray, whilst you seem fully exposed.]

VISITS TO GARDENS PUBLIC AND PRIVATE.

CAMLIN, THE SEAT OF JOHN TREDENNICK, ESQ.

On the banks of the river Erne (which from its issuing from the lake of the same name at Beleek to its entrance into the Atlantic has a fall of about 170 feet in about five or six miles), stands a house which from my earliest days I recollect to have heard of as one where gardening was diligently carried out, and successfully too; and I was the more anxious to see it, inasmuch as the old-fashioned notions of horticulture were still cherished there, and everything had not been made subservient to one modern innovation—an advantage of which I think few can estimate the importance when climatic influences have to be combated. I have oftentimes seen in Ireland gardens which are perhaps very foreign to modern notions, but which always gave and do give me the notion of great enjoyment—well and abundantly stocked with fruit of all kinds, with an abundant supply of vegetables, and then a green sward with a shrubbery at one side or in the centre, with beautiful shaded walks of Yews, Laurels, or even deciduous trees, inviting to meditation, and suggestive of comfort and ease in the sultry days which sometimes visit these northern regions. Of course, all this is most heterodox in the eyes of those who consider that everything ought to be *en règle*, and that uniformity (beds matching beds, colour, and height, and shape all alike), is that alone after which we ought to strive. But just look at the advantage in such a season as this. What are grass gardens now? I have seen many a one lately, and, as might be expected, green is the very last colour one sees in them. Many of the beds are only half filled with flowers; and in these bright glaring days the brilliant reds and yellows are anything but pleasing to the eye. In fact, for those who have been advocating a mixture of the old and modern systems of gardening this has been a most opportune season, affording them many a fulcrum by which they may move their object.

The gardens at Camlin may be divided into three portions, of which the walled-in one contained as magnificent a crop of fruit and as fine a collection of vegetables as are to be found anywhere. And here let me say I was very much surprised to find how very little difference there was in the state of forwardness between the north-west portion of Ireland and my own extreme south-eastern portion of England. Strawberries were all, or nearly all, over; Gooseberries and Currants ripe; Cherries, the later sorts still to be had; Apples and Pears, &c., in much about the same condition; and yet we certainly have a much larger share of sun and warm weather than they have, although the variations of temperature are not so great: and this is probably the reason of their productions not being so much retarded as their position would lead one to imagine they would be. There is but one large vinery where Grapes are forced, and well too. (And talking of Grapes, I forgot to mention in my account of the Rockville Gardens that Mr. Bewley entertains the notion that in order to obtain flavour and colour a different system should be adopted. He consequently keeps his house closed even during intense sun, running up

the thermometer to 120° during the day, and ventilates freely at night, thereby, of course, reducing the temperature immensely. He himself speaks favourably of the results, and nothing could be more evenly beautiful than the crop I saw in the house when I was there.) The whole of the large garden, comprising several acres, was kept in excellent order, and well repaid the care and attention that had been bestowed upon it.

Close to the house, which has been almost rebuilt by the present owner, is a grass garden; and it will, I am sure, gladden the heart of "A WILTSHIRE RECTOR" to know that this is one place in which "King Croquet" has been dethroned; for though wherever one goes quiet little lawns and grass gardens are gradually usurped by his most despotic majesty, the lawn here, which was used as a croquet ground, has been cut up into beds, and the mallets, and hoops, and balls banished to wait the time when some other convenient place can be found for them. The beds were well filled; but unfortunately that terrible frost that occurred on the last night of May played sad havoc, and many of the beds had to be filled again, so that there was a deficiency of bloom. One bed I particularly noticed as seeming to be a very nice relief to the brilliant colours which are generally the rule in such gardens; it was entirely composed of the Variegated Alyssum, which is used oftentimes for edging, but in this way it was to me a novelty and a pleasing one. There were the usual plants that we see in our modern system; and one can have no objection to it when, as here, the old friends are not thrown on one side for these new faces.

Alongside of this, but separated from it by a wire fence, is another piece of ground, partly shrubbery and partly garden, in which is a very fair specimen of the Nesfield style of gardening. It is a long but somewhat narrow steep, composed of a series of small beds, in which are planted some of the lower-growing bedding plants, while different coloured gravels, &c., are added. It was a combination of the two styles, and better, I think, than a rigid adherence to the system of oil-cloth patterns, which have justly excited so much ridicule; yet the effect has been obtained by great trouble and considerable expense, and, after all, I question whether it is at all worth it. I know that Mrs. Tredennick regrets much that many of *her* old favourites have been consigned by the gardener to oblivion to make room for his plants.

Roses seem to flourish here. Some of the standards were of great size, and the character of the soil tends to bring out their colours well. A bed of Moss Roses at Fort William, just opposite, was of the most luxuriant character, and showed clearly how admirably the soil agreed with them. There were not many of the newer sorts, but those good varieties which are to be found in the garden of every Rose-fancier.

I do not intend to intimate that Camlin is what is called a show place, but it is a very pretty place; and the traveller from Enniskillen to Ballysheanon would do well to stop for a few minutes and ask permission, which will be freely granted, and I do not think there will be much regret for the delay it has occasioned.—D., *Deal*.

MANCHESTER GOOSEBERRY SHOW.

How few of our readers know how a Gooseberry show is conducted; and the majority of them when reading of any kind of horticultural exhibition, immediately see, "in the mind's eye," raised stages, formally arranged plants, and batteries of red flower-pots. There are no such concentrations of things odious to good taste at a Gooseberry show; there is no attempt at display; everything looks like business, and every one present seems to mean it.

The very hostelry where this Manchester Show was held is in good keeping with the exhibition; it looks like a resort of business, and its sign, "The Falstaff," shows the rotund knight much belike an animated bloated Gooseberry, such as we saw there on the 6th day of August last past. Along the centre of an upper chamber a table was placed, on each side of which sat earnest men, the majority of whom had each a box enveloped in a handkerchief, and guarded by his resting elbow. At the top of the table sat two officials,

rendered grave by a consciousness of the power delegated to them. Before one of them was an accurately adjusted balance, and a long array of weights, from a single grain to that of many pennies. This was the decider of each berry's excellence in heaviness. By his side sat the recorder of each berry's weight submitted to the balance; and from his book—the chronicle of Gooseberrydom—there is no appeal.

Gooseberries are divided into four classes, distinguished by their colour—the white, green, yellow, and red. A berry is called for in a class—say greens. Some one takes a berry from its cotton envelope in his box, its weight and ownership are ascertained and recorded; another and many others follow in the same class, and it is found that William Jones's *Thumper* is the heaviest. "Has any one a berry that will beat that?" A pause, and then a sly old fellow unfolds the cover of his box; there is a general shuffle of excitement, as he produces his Gooseberry from its cotton wrapping, and hands it to the weigher. All heads bend towards the balance. It is heavier by five grains than *Thumper*, and Thomas Smith's *Conqueror* is placed as the prize berry of its class in the exhibition box.

This box has a solid bed of plaster of Paris within it, and oval hollows are scooped in that bed ready for the repose of the victor berries. One Gooseberry was announced to weigh 33 dwts. 19 grs.

NORTHWICH GOOSEBERRY SHOW.

List of prizes awarded at the Gooseberry Show, held at the Angel Inn, Northwich, Cheshire, July 30th, 1884:—

EXHIBITOR.	NAME.	dw't. gr.
Mr. F. Yates, Maiden Prize (Kettle).....	Levell.....	29 4
Mr. G. Beckett, Twins (Pruning Knife).....	London.....	45 10
Mr. J. Johnson (Premier Prize £1).....	Antagonist.....	34 4
Mr. W. Jones (Steward's Prize, Copper Kettle).....	London.....	31 2
Mr. G. Beckett do. do.	Levell.....	26 7
Mr. T. Lancoley do. do.	Shiner.....	28 4
Mr. C. Leicester (Macclesfield) do.	Postman.....	27 0
Mr. T. Nicholas (Steward's Prize, Brass Pan).....	Lord Liverpool.....	25 9
Mr. R. Foster do. do.	Drill.....	26 23
Mr. J. Jones do. do.	Telegraph.....	27 4
Mr. C. Leicester (Plumley) do.	Antagonist.....	26 12
Mr. F. Jameson (Steward's Prize, Tea Pot)...	Lion's Provider.....	25 0
Mr. T. Bull do. do.	Seeding Mary Ann.....	23 12
Mr. Joseph Wynne do. do.	Thumper.....	25 23
Mr. G. Plant do. do.	Freedom.....	21 12

RED CLASS.

Mr. F. Jameton.....	London	29 25
Mr. W. Jones.....	Beauy	27 0
Mr. T. Lancelley.....	Flinton	26 15
Mr. J. C. Lancelley.....	Flintshire	24 4
Mr. G. Lister (Plumber).....	Duke of Sutherland	25 25
Mr. J. Johnson.....	Lions' Provider	25 18
Mr. J. Johnson.....	Give it a Name	25 4
Mr. J. Wynne.....	Claydon	24 15
Mr. T. Lancelley.....	Slaughterman	24 12
Mr. G. Plant.....	Wonderful	24 10

YELLOW CLASS.

Mr. J. Johnson	.....	Levellor	.....	26 12
Mr. J. Beckett	.....	Oyster Gist	.....	25 4
Mr. W. Jones	.....	Tinker	.....	24 14
Mr. G. Plant	.....	Drill	.....	24 12
Mr. G. Leicester (Macclesfield)	.....	Trumpeter	.....	24 10
Mr. J. Johnson	.....	Pera	.....	24 6
Mr. F. Jameson	.....	Leader	.....	23 12
Mr. C. Leicester (Macclesfield)	.....	Austrana	.....	23 10
Mr. F. Jameson	.....	Catherine	.....	26 2
Mr. J. Jones	.....	Cramp	.....	23 22

GREEN CLASS.

Mr. Charles Leicester (Macclesfield)	Jerry	27	8
Mr. J. Johnson	Stockwell	27	6
Mr. J. Johnson	Nordlife	26	4
Mr. J. Johnson	Thumper	25	15
Mr. T. Lancelay	Shiner	24	19
Mr. J. Wynne	Telegraph	24	8
Mr. C. Leicester (Macclesfield)	Sir G. Brown	24	6
Mr. G. Beckett	Bravo	23	18
Mr. C. Leicester (Macclesfield)	Rough Green	23	6
Mr. J. Johnson	Gretna Green	22	18

WHITE CLASS.

Mr. W. Jones	Antagonist	27
Mr. C. Leicester (Macclesfield)	Mitre	26
Mr. J. Fyfe	Snowdrop	26
Mr. J. Jackson	Freedom	26
Mr. Johnson	Careless	25
Mr. T. Lancelley	Hero of the Nile	24
Mr. C. Leicester (Macclesfield)	Jenny Lind	24
Mr. F. Jameson	Snowflake	23
Mr. J. Johnson	Quenser	23
Mr. W. Ryley	Queen of the West	23

BUSH APRICOTS.

THE Apricot being a favourite fruit with me, I read with interest the article in No. 177. Six years ago, come November, I planted two very young trees of the Breda variety as bushes, and they grew so vigorously that when four years had expired, they each of them measured fully 10 feet in height, and as much across, although rather severely pinched and cut back. In the third and fourth years they blossomed abundantly, but would not set fruit. About this time your contributors and readers spoke out. Some complained that they could obtain no fruit, and Mr. Rivers advised that the trees should be turned into firewood. I had at that moment come to the same conclusion (spring of 1863), and had commenced cutting one down; but when about to sever the last leader of this fine bush, a fit of compassion seized me. I trimmed neatly the mutilated parts, lifted the tree, and replanted it in another place. It bore and ripened fruit the same year, and the untouched companion bush also produced a heavy crop of delicious fruit. This year they both bear a light but serviceable crop.

The description of De Jonghe's Sweet Kernel Apricot closely agrees with the Breda. Is it better, as a more sure bearer? or should I do well to plant De Jonghe's Diamant? At the present time I have scarcely any wall to use, and am glad of bushes that succeed, as they take no gardener's time. I can manage them myself, which I love to do. The Apricot is a delightful companion all the growing season; beautiful in blossom, beautiful in its lively and luxuriant foliage, and not less so when occasionally adorned with its golden fruit.—CHARLES ELLIS, *The Orchard, Upper East Sheem.*

[Until the new varieties which you name have been grown for some time in this country, it would be impossible to answer your questions with certainty.]

AMONG THE WELSH MOUNTAINS.

"I should like to visit Wales if it were only to see the *Sambucus nigra*, the plant said to be always found near old cottages, placed there by their first owners to keep away the witches." So said a fair young lady not long since. "You may remain at home and see it," was the reply; and a spray of Elder was fetched from a neighbouring hedge.

This is not quoted merely for the purpose of noting that the Elder is usually found near old cottages in Wales and elsewhere, and that it might have been placed there for anti-witchery purposes, or because a favoured wine is made from its berries, or a cosmetic from its flowers; but the conversation is quoted as an example of things being sought for at a far distance which might be obtained close at hand—only because we do not know better.

Take another instance. Englishmen go abroad in search of the grand and the beautiful, yet the writer of this has ascended Table Mountain at the Cape of Good Hope; has done the same among the rocky mountain passes of St. Helena; and he has threaded his way among the jungled hills of Sumatra. From all the lofty elevations of those far-off lands he has looked upon Nature in some of her grandest and most beautiful aspects; and now he records his experience that their equals—their equals fully—are in the mountain districts of North Wales.

This is written sitting in a window looking down the lakes of Llanberis, or, as they are here called, Lyn Padarn and Lyn Peris. The densely wooded feet of the mountains Yr Alltwen and Coel Mawr are on either hand coming down to the lake's edges, and would have been bathed by the waters but that a road has been cut around the margin. Nestling in these mountain woods peep out a few white-walled cottages; in the distance, where the waters of the lakes commingle, and on a rocky prominence, stands that castle of many mythic tales—Dolbadarn; and beyond that, towering as if in emulation to excel in height, are Glyder fawr, Mynydd fawr, and Snowdon.* In the garden borders near him are in full bloom surpassingly fine specimens of Fuchsias, Dahlias, and Hydrangeas—the latter blue-flowered without the aid of the gardener. Truly this mountain-enclosed valley is a combination of the grand, the beautiful, and the

cultivated, which may be often equalled but cannot be much excelled.

Other lessons, however, are to be learned among the Welsh mountains, and they shall be jotted down, though small details are felt as a descent after sweeping over such a grand total.

The present year has given birth to a cry against hotel landlords that has swollen into a mania for joint-stock-company hotels; whereas it would have been wiser to encourage those landlords who manage their establishments liberally, make their hotels enjoyable, and charge moderately. If asked where such are to be found, I reply there are many such in North Wales; and two at once rise upon my memory—the hotel at Capel Curig, and the Penrhyn Arms at Bangor. Moreover, they are surrounded by gardens thrown open to visitors, well ornamented with flowers, shrubs, and trees, and preserved in order such as is only usual in private establishments.

Not far from the Penrhyn Arms, which I would select as a model hotel, occurs that model village, Llandegai. I visited the place to see the tomb of James the First's Lord Keeper, Archbishop Williams, but was far more gratified by the entire village. Every cottage, built of stone and slated, is a model of cleanliness and perfect repair; every hedge is Quick, uniform in height, and scrupulously clipped to a pyramidal form; every cottage has a garden, and every garden is fully stocked and well cultivated. Every cottager is tidy; and I visited the place more than once, attracted by the appearance of comfort and contentment which seemed all-prevalent; and it is no exaggeration to say that I felt the happier for looking upon a place where labour and respectability, utility and perfect order, are so intimately combined.

Cottage gardening there is pursued under favourable circumstances. Lord Penrhyn is its patron, and a sheltered valley contributes alluvial soil and a genial temperature; but I have seen gardening in North Wales pursued under no ordinary difficulties.

At Capel Curig I strolled up a mountain side to an elevation on which clung a plantation. Hazel had there been combating with the elements, and was worsted in the struggle. Birch, however, defied the winds and other mountain severities; and just above them on a ledge of the mountain was imbedded a cottage. It has even a name in the Ordnance map—Bryn Engyn. I could say much about the simple manners and kindness of its tenants, but they chatted only in Welsh, and so we could only telegraph by nods, and finger-pointings, and smiles, there were no frowns needed. Well, in this region of Birches was a small garden, with a wall needfully high to protect its tenants, which were Gooseberries, Black Currants, Cabbages, Carrots, Potatoes, Turnips, and Peas, just ready (August 6th) for use—a tall late sort. Nothing could be said in commendation of the horticultural skill displayed, but the produce of the vegetables was a full average, except of the Carrots, and they would not require this exception had they been sufficiently thinned.

Good gardening, however, or gardening of any degree of merit or demerit, does not characterise North Wales; but it is satisfactory to notice that there is such a prevalent taste for botany among tourists, that there are residents who specially announce their readiness to aid in guiding to the localities where rare plants dwell, to assist in naming and mounting them, and to supply specimens. As examples, there is Mrs. Sykes, at Llandudno, and "John Roberts, Botanical Guide," at Llanberis. The latter has a greenhouse in which he has for sale potted Ferns, natives of the vicinity, and the list is not scanty.

Whoever intends to ascend Snowdon, should do so from Llanberis. There is no more either of difficulty or danger in accomplishing the ascent from thence, than there is in ascending any steep, stony bridle-way, for the road is only traversable on horseback or on foot. So little is the difficulty, that an invalid lady, incapable of walking anywhere without support, reached with me the extreme summit of Snowdon, mounted on a mule, and aided by that most attentive and careful of guides, Elias Roberts, brother of the "Botanical Guide." The supply of "Snowdon ponies" is ample—sturdy, sure-footed beasts, not to be urged out of what they know is a safe, short-stepped walk, by any amount of persuasion, verbal or whackamical; and if the

* Glyder fawr is 3375 feet high; Mynydd fawr, 3223; and Snowdon, 3590.

tourist, in addition to the aids we have mentioned, can secure rooms in that hostelry where cleanliness, kindness, and economy preside—Thomas's Snowdon Valley Hotel, but which deserves to be called "The Tourist's Home"—he may be sure of a combination of "traveller's joys" rarely attainable.

One gentleman, suffering from acidity temporarily, not constitutionally, I hope for his own sake, told me that, "mounting up Snowdon was going a long way with nothing to see when you got there!" This is not the place to dwell on views having for their outlines the mountains of Ireland, Isle of Man, Westmoreland, and Cheshire, with foregrounds such as Salvator Rosa and Poussin loved to draw, but the botanist will agree with me that on and about Snowdon there is something "to see when you get there," if he will read this list of its rare plants.

Allium natans (Floating Water Plantain).
Anthericum serotinum (Spiderwort).
Arabis hispida (Alpine Rock Cress).
Arenaria verna (Spring Sandwort, and two varieties).
Aspidium lonchitis (Rough Alpine Shield-Fern).
Asplenium viride (Green Maiden-hair Spleenwort).
Campanula rotundifolia (Round-leaved Bell-Flower—one-flowered variety).
Carex atrata (Black Sedge).
curta (White Sedge).
rigida (Rigid Sedge).
Cerastium alpinum (Alpine Mouse-eared Chickweed).
latifolium (Broad-leaved Mouse-eared Chickweed).
Cnicus heterophyllus (Melancholy Thistle).
Cistopteris alpina (Laciniated Bladder-Fern).
Cochlearia Greenlandica (Greenland Scurvy Grass).
officinalis (Common Scurvy Grass).
Draba incana (Twisted-podded Whitlow Grass).
Eupetrum nigrum (Crowberry).
Festuca vivipara (Viviparous Fescue Grass).
Galium boreale (Cross-leaved Lady's Bedstraw).
Habenaria alba (White Satyrian).
Hymenophyllum tunbrigense (Tunbridge Filmy Fern).
Isotetes lacustris (Lake Quillwort).
Littorella lacustris (Plantain Shore Weed).
Lobelia Dortmanna (Water Lobelia).

Lycopodium alpinum (Savin-leaved Club Moss).
annotinum (Interrupted Club Moss).
selaginoides (Prickly Club Moss).
Oxalis reniformis (Kidney-leaved Mountain Sorrel).
Papaver cambricum (Welsh Poppy).
Farnassia palustris (Grass of Farnassus).
Poa alpina (Alpine Meadow Grass).
glauca (Glaucous Meadow Grass).
Polygonum viviparum (Alpine Bistort).
Polypodium arvenicum (Hairy Alpine Polypody).
phegopteris (Pale Mountain Polypody).
Pteris crispata (Curled Brake).
Ranunculus acris (Upright Meadow Crowfoot).
Rhodiola rosea (Rosewort).
Salix herbacea (Least Willow).
reticulata (Wrinkled-leaved Willow).
Saxifraga ajugifolia (Ajuga-leaved Saxifrage).
hypnoides (Moss Saxifrage).
oppositifolia (Purple Alpine Saxifrage).
rivalis (Clustered Alpine Saxifrage).
stellaris (Starry Alpine Saxifrage).
Serratula alpina (Alpine Sawwort).
Silene acaulis (Moss Campion).
Subularia aquatica (Water Ailwort).
Thalictrum alpinum (Alpine Meadow Rue).
minus (Small Meadow Rue).
Vaccinium vitis-idaea (Cowberry).
Woodia alpina (Bolton's Woodia).

The employment of guide to the dwelling-places of these plants is one of danger, for many of them are found on the ledges of some of the most precipitous rocks. In walking through the Pass of Llanberis, I turned aside into the burial ground of its very plain little church, and one of the first epitaphs I could read, for the majority are in Welsh, records the death of William Williams, "for more than twenty-five years botanical guide at the Victoria Hotel, who was killed by a fall from Clogwyn y Gownedd, June 13th, 1861, whilst pursuing his favourite vocation."

Not many yards from this epitaph is another, preserving the remembrance of an event which caused a general painful sensation at the time of its occurrence. I need add nothing to these its details.

"Sacred to the memory of the Rev. Henry Wellington Starr, B.A., Curate of All Saints, Northampton, who perished on Snowdon while on a tour through North Wales, September 15th, 1846, aged thirty-two years, and whose remains, discovered June 1st, 1847, were interred beneath this stone. An only son, and a faithful minister, he was universally regretted, and he left a mother and two sisters to mourn for life their irreparable loss."

The monument bearing this inscription is beneath a very ancient Yew, from which the large lateral branches have been barbarously lopped; but a younger evergreen has been planted by the tomb, and, as is the prevalent custom, Box and other evergreens are arranged upon and around neighbouring graves. Even on the ill-cared-for resting place of the deceased cottage children mentioned in Wordsworth's touching lyric, "We are seven," I found flowers were planted, though I wish the grave was better kept of these who, "in Conway churchyard lie."—G.

NEW PEACHES.

EXQUISITE.—Through the kindness of the Rev. T. Collings Bréhaut, of Guernsey, we have been favoured with a specimen of this remarkable Peach. Last year we were equally indebted to this gentleman for a similar favour, but the specimen which we received this year far surpasses that sent us last.

The fruit is of immense size, being 10½ inches in circumference, and weighing 9½ ozs. It is roundish oval in shape, marked with a distinct suture, and terminated at the apex by a sharp nipple. The skin is yellow as that of an Apricot, with a dark crimson mottled cheek on the side next the sun. Flesh deep yellow, veined and stained with deep blood red at the stone, tender, melting, juicy, rich and vinous. This is a noble Peach, and one of delicious flavour.

Mr. Bréhaut says—"I had it from Mr. Rivers in 1860. It fruited in 1862, on the 25th of August; again in 1863, on the 21st; and now it will be ripe about that time as you see. The tree itself has very yellow leaves and wood, and grows fairly, but I do not consider it prolific."

EARLY ALBERT.—This we received from Mr. Rivers, of Sawbridgeworth, whose seedling it is. The fruit is above medium size, roundish, frequently with one side of the suture higher than the other, and pitted at the apex. Skin greenish yellow, covered with crimson points on the shaded side, and deep crimson becoming sometimes almost black when grown against the wall, and fully exposed. Flesh white, with a faint brick-red tinge next the stone, from which it separates freely, very tender and melting, and with an abundant sugary and vinous juice, which is very richly flavoured. A delicious early Peach, ripe about the middle of August.

CULTIVATION OF THE MELON.

(Continued from page 133.)

SINCE hot water circulating in iron pipes has been employed for heating horticultural structures, the old-fashioned system of growing Melons on beds of fermenting materials has been to a great extent superseded. It is decidedly a less troublesome, and a more certain method of applying artificial heat, and has given an impetus to horticulture, especially to that branch of it relating to the cultivation of plants from warmer climates; and I will now proceed to treat of the application of hot water in iron pipes, and of hot air by smoke-flues, to the cultivation of the Melon, whether in pits without trellises for the shoots to run upon, or in larger and loftier houses.

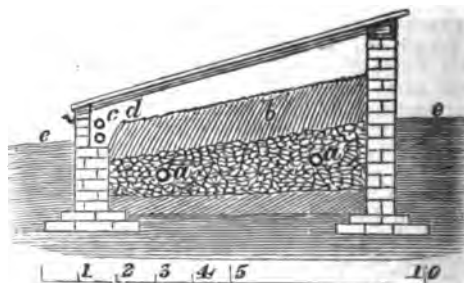


Fig. 7.

Fig. 7 shows an ordinary pit heated by two hot-water pipes, *a*, for bottom heat, which are surrounded by rubble, such as half bricks, &c., from 6 to 9 inches of the same being placed above them; the rougher parts of the compost are then put on, or a layer of charred turves an inch thick, so as to prevent the finer soil from passing into the rubble, and on that from 10 inches to a foot of soil, *b*, in which the Melons are planted in the centre of the bed. They are trained over the soil in the same manner as those in dung frames. There are two four-inch hot-water pipes in front, at *c*, to maintain the proper degree of atmospheric heat, the soil being kept from them by a slate on edge, *d*. *e e* is the

ground level. Except in being heated by hot water the pit does not differ from an ordinary one.

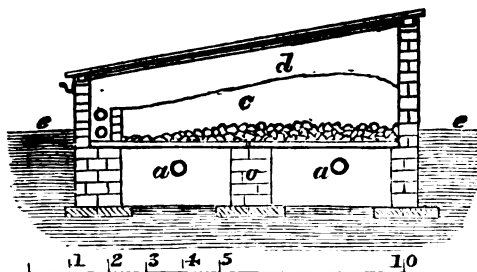


Fig. 8.

Fig. 8 is the end section of a pit heated by hot-water pipes, differing little from the preceding, except in the bottom heat being supplied by two four-inch pipes to a chamber, *a a*, the soil being supported above by flagstones, which also form the upper cover of the hot-air chamber; two of their ends and sides rest on the outer walls, the other on pillars of brick or stone as *o*. The flags are not laid in mortar but have the joints open. A few inches of rubble placed on the flags prevent the joints from becoming choked with soil. There are two four-inch pipes in front for top heat, *c* is the space for a thickness of 1 foot of soil, and *d* the space for the plants; *e e* is the ground level. This mode of furnishing bottom heat to Melons—viz., by hot-air chambers, is preferable to placing rubble over the pipes as in fig. 7, or soil immediately in contact with the pipes. The heat is more equable by the chamber system, and communicates to the soil above a much lower temperature; but the heat is greatest by the other plan immediately above the pipes, whilst the remaining parts of the soil are nearly cold. By the chamber system there is a large volume of heated air of an equable temperature throughout, presenting the same evenness as a bed of fermenting materials. There are more ways of communicating top and bottom heat for Melons, but these two are the best that I know of. In fixing the pipes it is advisable to have those for top heat flows, and those for bottom heat returns.—G. ABBEY.

(To be continued.)

ORCHARD-HOUSES.

In retiring from this controversy I cannot but think Mr. Abbey would have been wise to have dropped the subject instead of reopening the question. What does he wish to prove, or what impression does he wish to produce before retiring? Is it that he did not advocate open walls heated by flues for the production of Peaches in place of orchard-houses? Your Number of April 19th will settle that question. Is it that he cannot grow Peaches without fire heat? Few will be disposed to doubt his evidence in such a cause. Is it that no one else can grow Peaches and Apricots without fire heat? Scarcely, one would think, whilst every year Mr. Rivers and myself advertise when our fruit is ripe, and invite all the country to see it. Is it that the fruit is inferior when grown under glass? Of course it may be if badly grown, if the trees are covered with red spider; but is it necessarily so? This is what is so trying to our tempers, that people who know so little of the subject should reiterate such nonsense time after time. Mr. Abbey says, "An Apricot from an orchard-house is of a sickly colour all over." Why, he never can have seen one. I have some now better in flavour than he or any one else ever ate from a wall, and as handsome in colour as an Apricot can be, equally ripened all round, and like a sack of honey in texture, and Mr. Rivers has had this year pecks of such fruit. Then with regard to Peaches, my man has just sent in a Grosse Mignonne, which has fallen off a tree growing in the old orchard-house with boarded sides and ends, and with an open ventilating space, which cannot be closed, under the eaves all round; it weighs nearly half a pound, and is one of many like it left on the trees. If Peaches and Apricots are not superior when grown in an orchard-house to those from an open wall, what

are we to think of the moral character of those who have eaten the thousands we have given away? I have never yet heard one who said he or she had eaten as good from a wall, and I have refused 7s. a-dozen for a whole houseful of Peaches, that I might give all who came an opportunity of judging. All that I would contend for is, that what is easy to me ought not to be difficult to any one worthy of the name of a gardener.

Mr. Abbey says many orchard-houses have failed. There is no doubt of it; what other kind of cultivation does not fail in many places? I was shown three good vineries some time since with twenty-three bunches of Grapes in the three houses: successful Grape-growing is too common for the system to bear the blame in this instance. I had a gardener here only yesterday who said his crop of fruit was quite equal to mine, and his trees as clean and healthy, who failed miserably the first year. He acknowledged he had not half watered his trees the first season, and they were eaten up with red spider; he took more care of them afterwards, and for two years the trees have been all one could wish. I said, "Well, what do you think of the system now?" "Why," he said, "I hope to have another house soon, for I take more pleasure in the orchard-house than anything else." I do not like to mention names of private individuals without their leave, but as the place is only six miles from here I will undertake to show it to Mr. Abbey. Within a mile or two of this place I can point out several houses where the gardeners failed the first year, and never afterwards. If trees are but kept clean and healthy there is less difficulty in fruiting them every season. This, as well as greater experience, is sufficient to account for success. Many of my best trees have been ten years in pots.

But are there no cases of constant failure? I am happy to say I only know of one in this neighbourhood. A gentleman in the north of this county built a good house, I think three years since; when his gardener received the plants which had been pinched during summer and were full of well-ripened buds, he cut most of them down to improve them. Of course the first season was a failure. During that summer he refused to pinch the trees, "he had grown Peach trees before, and knew all about it." The house was like a Willow holt, full of long unripened shoots, many of which were cut down again in spring, and there was a very small crop the second year. The third summer I met the owner, who told me he had a better crop, but not at all what he expected; I told him it was more than I expected if he had any improvement to report. But he asked, "What would you advise me to do? I have a few trees with a good crop upon them, and should like them to be fine, how ought my man to treat them?" I told him my man had just top-dressed ours with a mixture of horse-droppings and malt dust, and he would repeat the dressing in July. The gentleman told his gardener what he had heard. In a day or two afterwards this Solon in a blue apron took out several inches of soil, quite baring the roots, and placed this hot stimulating manure in immediate contact with them! Of course all the fruit and most of the foliage dropped off, and so ends at the third—three seasons lost. The gentleman was advised when next he top-dressed a grass field to pare off the turf first, and he acknowledged it would be a parallel case. There are many men who will never learn this or any other new system of cultivation. If they were in a position to see it every day, they would in time learn it as they learnt all they know, by what is termed rule of thumb, a rule which requires very little causality.

I shall always hold that success is the rule, non-success the exception, in all cultivation under glass, where talent is united with industry. Where climate and moisture are under control there is but little room for excuses. After many years of experience I can honestly say the orchard-house is all, and more than all, I hoped for. In a bad cold district hot-water pipes may be necessary—here they are not required—to get better fruit, with certainty, every season, than we can ever produce on walls.

When houses are built for each kind of fruit, and Apricots, Peaches, Plums, Cherries, &c., are grown separately, a new era will have commenced in gardening; and when 300 square yards can be covered with a house fit for a nobleman for a little more than £200, who can doubt such will be the case? In a short time men will be found writing that there is

nothing new in orchard-houses, as we are now told there is nothing uncommon in producing Grapes in January. By-the-by, I was on the Committee when those new and old Grapes were exhibited; and though most of us voted for the old Grapes, because the competition was for flavour alone, and the new ones were unripe, yet all agreed that the new ones were worth three times as much in Covent Garden, even in their then state.—J. R. PEARSON, *Chilwell*.

HOTBEDS.

I HAVE just been reading "A Gossip about Hotbeds," and the advice given is very good. About twenty-six years ago I lived with an old squire as gardener, and had the management of a three-light and a two-light pit. One day I went out about two miles to see a friend who was gardener at an old hall. He had two ranges of pits, each consisting of six or eight lights. His Cucumbers and Melons were just beginning to show fruit, but the plants had sunk down too far from the glass, and he said to me, "Next year I will try the soil on boards." I pondered over the remark, and in the following March I filled my two-light pit about three-parts full with worked manure, putting in posts in the corners and ledges, in order to keep the boards at about 20 inches from the glass. The pits, I must observe, were badly situated, being on a rising ground and exposed to north winds, and when I put my plants in, the wind cut them at the back if I gave air, and if not the steam was too much for them. I found I had not sufficient heat for that early period of the season, so I put linings all round, sunk 2 feet beneath the surface. I thus obtained more heat and also more steam, and my plants looked worse and worse. The thought struck me one day, I will knock out half a brick just below the boards, about the centre of the front wall. I did so, and the steam came pouring out like smoke from a chimney, and in a few days my sickly yellow plants began to grow freely, assuming a dark green colour. I have pursued the same course ever since and never found it fail.

A farmer near here who has a two-light frame has tried the following plan for six years and he is always successful:—He takes six or eight cartloads of fresh dung from the stable, places it under a south wall just outside the garden, builds it square to the height of about 3½ feet, beats the top level, then takes two boards about 10 inches wide and an inch or two longer than his frame, and places one about the centre of his bed, which is from 1 foot 3 inches to 2 feet wider all round than the frame. On each side of his centre board he places strips of old board, old stakes, beam rods, old gate bars, or palings, leaving intervals of an inch or two for the steam to rise through, these strips only extending an inch or two wider than the frame all round. This done, he next puts on his cross-bars which are about the thickness of a strong hedge stake, and their ends being cut flat these rest on each side of the centre board for about 2 inches. He then puts on his other centre board so as to cover the ends of the cross-bars, and thus there is an interval between the two boards which acts as a flue for the escape of rank steam. He then sets on each side of his top board another lot of strips like those at the bottom, and if a little closer together all the better. If short of strips he puts on a few Raspberry cuttings or stout straw. This stage is about 8 or 9 inches above the level.

Having made this framework he packs a lot of short dung all round it, and puts on 2 or 3 inches of rotten dung or clay, treading and beating it down so as to prevent the rank steam from going through. He puts on his frame and places 2 or 3 inches of dung or soil up the sides, so when the steam rises it works along the cross-bars and escapes by the steam flue along the centre. He next puts on about 9 inches thick of soil all over and treads it down. Sods 2 inches in thickness chopped up, some rotten leaves and rotten dung mixed together, form the best compost, a little sandy soil being placed at the top.

After making the sides of the bed even he drives in ten or a dozen thatch pegs round the edges, leaving the tops about 4 inches above the surface, puts long strips of weed just inside the pegs, and fills in with soil at the two sides and front of his frame. On the beds thus formed he sows Radishes and a little Drumhead Lettuce mixed. The Radishes soon

come up, and when these are drawn the Lettuces appear, and if too thickly they can be transplanted into the garden. He then drives in six or eight thatch pegs round the hole at the back and puts some straw round the pegs, for this hole must be kept quite clear. He next builds some manure about 1 foot or 15 inches up to the wood at the back of his frame, and in a day or two the steam will be up; he obtains some Cucumber plants from a neighbouring garden, plants them in the frame, and with proper attention he can have Cucumbers ready for cutting in about three weeks. Last year he had a good supply from May to the middle of October.

The advantages of this plan are, that there is no danger of over-watering; that the plants are generally covered with dew as in the open ground, at least on the under side of the leaves; that when the Radishes and Lettuces are off the roots of the Cucumbers strike into the soil on the outside, getting the benefit of every shower of rain; and, finally, that on a keen windy day the frame can be kept close without the plants being injured by the steam of the bed.

If Radishes, &c., are not wanted the manure can be brought up to the sides of the frame, when a bed is made up much earlier. Cuttings of all kinds do well. I generally cut Cucumbers in the last week in March. One season I cut ripe Melons on the 27th of May. Potatoes do exceedingly well. In working brick pits I never like to raise the linings higher than the soil inside, as they only require bottom heat to cause a steam in hot weather.

I have generally found the only plan to keep a good succession of Cucumbers in pits is to raise young plants from cuttings and pull up old exhausted plants, turning the earth as well as the linings before putting new plants in. I have always found a good depth of earth—say from 1 foot to 2 feet, advantageous for Cucumbers and Melons, especially in a very hot season, as the roots are not so liable to be scorched by the sun.

I have ventured to send you the above remarks, as I think every one should endeavour to impart to others as much information as he can.—E. MARSHALL.

[We are very much pleased with your idea of doing all the good you can, and imparting all the information you can, even in a humble way. Were there more of your disposition there would be more knowledge, more happiness, and more progress in this world in which we live. We honour your resolve quite as much though we may not be able to perceive much of the novel or progressive in what you describe. Keeping the bottom of such beds at a uniform distance from the glass by means of boards has been long practised. When the flooring was made secure, either by priming or by earth firmly placed over them, dang less sweetly worked could be used beneath them. In other respects, except keeping the roots out of the manure little advantage was gained over the common bed and frame, for provided the right distance from the glass is secured, the frame will sink as the bed sinks. We think your boards were too near the glass; instead of 20 inches, 36 inches would have been better, which would have given you 20 inches for soil and 16 inches for foliage and air. You might have moderated the force of the fresh air by hanging a close net over the opening, and if only a little tilting—say half an inch or less were given, the heated air as it passed out would have heated the cold air going in. We have seen men planting Cucumbers in a windy day in March, with as little care as to their tenderness as if they had been planting an Oak on the open common. This was not the way by which the old gardeners performed such wonders with their dung-beds, and we feel persuaded you know how to admit air and keep out steam. The success attending the knocking-out of a brick in the wall, just shows that you had too much noxious steam, from the dung not being sweetened enough, and the boards and soil too open to keep it down, and also that most likely there was too much bottom heat to suit the atmospheric heat. In the "Gossip" you refer to, fermenting material was scarce, and the most was made of it, and no danger at all was experienced from steam, the operations too being much less cumbersome than those to which you refer. Upon our own principle of following the plan that answers best, we advise you to follow yours, and would say to all with beds in brick pits, Adopt the same plan under similar circumstances. For ourselves

we rarely know anything about the effects of steam. All we want is the heat, and we have no difficulty in regulating it when obtained.

We have no doubt the plan adopted by your neighbour, the farmer, answers well, and if others try it we feel confident they will succeed as they ought to do. But with those six or eight loads of dung we think we could grow fine early Radishes without any trouble; and when they were done, we would take out the soil, turn out the dung, now pretty well sweetened, place as much more a little wrought at the bottom, and the materials of the first bed on the top of it, cover all with soil well secured at the sides, and as soon as that became warm turn out the Cucumber plants. Mind, we have no objection to the plan, but that it seems to require a great deal of doing, and we must confess we have little faith in such a steam chimney in a house as a substitute for fresh air. But, perhaps, we do not clearly understand the system. We see through all about the banking-up to keep any bad steam from rising, but we do not see so well the efficacy of the hollow chimney-mouth, &c. All danger from over-heating can be equally well prevented by making the bed much more shallow in the middle than at the sides, or what would come to the same thing, forming the bed there chiefly of faggots and prunings, or having a chamber underneath or due to be heated by outside linings. We do not agree with you as to never having linings higher than the soil inside. Provided we have enough bottom heat, we prefer that the top heat should come chiefly from heating the sides of the pit and frame, instead of much through the soil. When we could not do this, we have run pipes through the bed into the atmosphere of the house, with the ends open, and by this means obtain heat without any steam. We have no doubt but that the system answers admirably with you when you obtain such results, and we and others feel indebted for your giving us this information respecting your practice. We also approve of the greater depth of earth for Melons than is generally given; but that will not do without sufficient heat. Of course, from July to October, in a warm season, Melons require little more heat than what the sun gives them. Could we make sure of sunny days we might pretty well dispense with dung heat and hot water too. The variable character of the climate renders either desirable when thoroughly under command. —R. F.]

A GARDENER'S GRIEVANCE.

I mean you will give me a word of advice as to what I ought to do under the following circumstances.

I was till lately gardener to the rector of the parish I reside in. I had had my situation for more than two years, and had no particular fault to find with it, except that my master was occasionally in the habit of using language to me and employing epithets which were most painful to myself to listen to. I grant I was occasionally careless, but that was no reason why he should call me, as he sometimes did, "a donkey," or as he did on one occasion, "a conceited muff."

But, sir, I want to make you acquainted with the circumstances under which I left my situation, and to ask you whether I am not a very ill-used man. I will lay the entire case before you. My late master's garden, I must premise, opens into a field in which are kept three cows, and I was charged always to keep the gate, which stands between the garden and the field, carefully closed. I was generally very careful in this matter, but on one occasion, about three months ago, I left it open, and one of the cows found her way into the garden. My master was not pleased, as you may suppose; but as I told him I was very sorry for my carelessness he did not say much; but he reminded me, as I thought most unnecessarily, that I had once before neglected to close the gate, and he told me, as he had a right to do, that I must not do any such thing again. Well, sir, I said I'd be careful. But, unfortunately, about six weeks ago I neglected to close the gate as I came out of the field the last thing at night, and in the morning my master saw the three cows feeding on the lawn, and I am sorry to say that they had trampled down the flowers, and made sad work. My master called me to him, and showed a most unnecessary degree of temper in the matter, and spoke in

a way that I considered quite degrading to his character as a clergyman. He blew me up before the servant maids, and called me in their presence "disgracefully careless" and "unfit for my place;" and when I asked him what I was to do, the words he used were, "Why, you helpless dog, go and turn the cows into the field." We went together for this purpose, and when the job was finished, "Sir," said I, "it was hardly fair for you to expose me before the young ladies in the kitchen." "What young ladies do you mean, Jack?" he said, as I could see, very crossly. "Sir," I said most respectfully, "you just now spoke to me before the maidservants; and though I can bear to be rebuked by yourself, sir, when no one is present, it is very hurtful to my feelings to be called names when young ladies are standing by and listening. How, sir, can I keep up my character in the kitchen if you are the one to let it down?" Whereupon my master laughed at me, and said, "Go and look at the garden, Jack, and judge whether I said a word more than you deserved." "I shouldn't have minded," I said, "sir, if it hadn't been before the ladies."

In an hour or two's time he was in the garden with his wife and two daughters, and, sir, the remarks I heard them make about me were more than human nature could well endure. As ill-luck would have it, in my confusion I had neglected again to close the gate, and one of the cows was just coming into the garden, and my master called out in a loud voice and said, "Look there, Jack;" and when I had closed the gate, he said in a sneering sort of way, "I suppose, Jack, I had better say nothing to you before the ladies!" And then the ladies laughed at something. I could not make out what. I could not speak, but I felt most indignant.

Well, sir, after I had tidied up the place, my friend, the under gardener at the hall, came on an errand from the Squire, and before he left I saw him, and asked his advice. I told him that my master had let me down before the maidservants, and that he sometimes applied unseemly epithets to me; and he fully coincided with my remarks, and said he did not wonder I felt hurt; and when I went on to say I contemplated giving up my situation, he said that though he did not like men to give up places when they were in the main well off, yet that sometimes it couldn't be avoided; but he advised me to think well of it. However, on consideration, I determined to give my master a month's warning. When I had so done my master said to me (and mark, sir, how, even when in a good temper, he would not forbear calling names), "You are a silly fellow, Jack, and I hope as you grow older you'll grow wiser. But go to bed and sleep over it, and if you are tired of the place give me notice again to-morrow morning. If, however, you say nothing, I'll say nothing, if you are intending to be more careful for the future;" and then he said some more things, and I cannot say but that he spoke very kindly. However, on the following morning I repeated my notice, and my master said, "Very well, the greater donkey you; but mind, when you repent it, that it is your own doing, and not mine." When I told my friend, the under gardener at the hall, he said it was not pleasant to be called a donkey, and that a clergyman should know better. In a few days' time, sir, I heard, to my intense disgust, that this under gardener had applied for my situation, and was coming in my place!

Now, sir, was not this most unhandsome, and a violation of all professional etiquette? And, sir, my master told a gentleman who wrote for my character that I was a good servant; but he spoiled it by saying that I was sometimes careless; and, sir, I am not yet engaged. But, sir, my conscience assures me that I have acted right, and I hope that you will agree with me in thinking that if masters would keep their servants they should forbear from all such remarks as are calculated to wound their feelings, especially before female servants, who are commonly sufficiently impertinent without the opportunity being given them of hearing one blown up for any trifling act of negligence which any one is liable to. Nor was this the first time of my master's having done so; he did it last January, when the fire was out one morning in the greenhouse, and he said some plants were killed by frost. However, I was very sorry, and said nothing; but one cannot bear to be put upon too often.

I hope, sir, you will pardon my intrusion, but I am sure that as your publication is "for gardeners," you will not

refuse to give me your opinion and advice as to the circumstances I have laid before you.—J. M.

[You seem to have acted very stupidly by so repeatedly leaving the gate open, and very foolishly in leaving a very kind and indulgent master.]

WORK FOR THE WEEK.

KITCHEN GARDEN.

ATTEND to seedling and newly-planted crops with water, and look over our former directions as to bringing up any arrears which, more or less, generally occur at this season. Keep a sharp look-out for the larvæ or grubs of a species of cockchafer, which at this season do considerable injury to newly-planted crops by eating off their roots. Carrots and slices of Mangolds may be stuck in the ground, when the insects will attack them and may be destroyed. Cabbages, no further delay should be allowed in sowing for a main crop. Celery, attend to the earthing, and when the attacks of slugs are apprehended, dust in lime about the plants before closing the earth around them. Herbs, collect them for drying, and on no account allow vegetable seeds to remain exposed after maturity on the parent plant. Lettuce, Brown Cös and hardy Cabbage should be sown for spring use; prepare a piece of ground in a sheltered situation, and plant out that sown last month. Onions, lay the tops; in cases where the crop is affected with mildew, ripen the bulbs as soon as possible, and select the worst for early use. Spinach, sow for late winter use.

FRUIT GARDEN.

Crevice formed between the soil and walls are the favourite lodgments of numerous insects; therefore, at this season the soil adjoining walls should be frequently disturbed. A shallow trench may be taken out all along, and as this is being proceeded with, the soil adhering to the bricks should be removed with a hard broom. The portion of the wall thus exposed should be sprinkled with lime water, to be used the instant it is made. Remove all superfluous shoots from wall trees, and expose the fruit of Peaches and Nectarines; but this must not be done by cutting off the foliage. If the foliage in any case is overcrowded the remedy must consist in the proper regulation of the shoots. Place dry bean stalks, cut in lengths of about 6 inches, among the branches, and by that means most of the earwigs may be caught before the fruit becomes ripe. Spread short grass or other soft litter beneath Peach and Pear trees to receive chance-falling fruit. Cut out the old wood from Raspberry plants, leaving only about six of the strongest shoots of this year's growth.

FLOWER GARDEN.

Look over rock plants, pruning back any that are overgrowing choice kinds, in order to give them sufficient time to break before winter. Cuttings of choice plants, such as *Saponaria ocymoides*, *Onosma taurica*, *Linaria alpina*, *Phlox setacea*, &c., should now be put in for planting out in spring. Keep such plants cut back as have a tendency to overgrow Box or other edgings. Peg down a few shoots of Chrysanthemums for layering in small pots. Petunias and other bedding plants of gross habit should have pruning betimes to keep them within bounds. Root a good stock of *Maurandias*, *Lophospermums*, Ivy-leaved *Geraniums*, and other climbers that add so much to the beauty of the flower garden. There is no grower who is in the least degree conversant with the cultivation of the Rose but knows that an abundant supply of stimulating materials should be applied to the autumnal-flowering varieties to have these in perfection during the next two months. Without applying manure water in large quantities there will be nothing but disappointment this season. We would, therefore, urge the necessity of stirring the soil about the roots of the *Noisette*, *China*, *Tea-scented China*, *Bourbon*, and *Perpetual* varieties, and when this operation is finished give the trees a good soaking with water strongly impregnated with night soil, or with drainings from the dunghill; an abundant, strong, and healthy bloom will be the reward, and the plants themselves will continue for a greater number of years to throw up continually an abundant supply of blooms. Thanks are due to Mr. Mechi for proving on a large scale the advantages which vegetables derive from the application of manure in a liquid form.

From a long experience on a small scale, but with the advantage of a much wider range of subjects, we can confidently affirm that he is right. When once the sewage water of towns can be brought economically to the surrounding lands and market gardens, a great improvement both in the quantity and quality of vegetables will be insured.

GREENHOUSE AND CONSERVATORY.

The time has now arrived when plants intended to afford a floral display under glass during autumn and winter must have attention. Let *Begonias* have another shift, if not already in pots sufficiently large. Keep the plants thin that their foliage may be preserved from injury. *Crowea saligna* and *Plumbago capensis* are both valuable autumn-blooming plants, and the latter furnishes large supplies of cut flowers. Attend to *Chrysanthemums*, water freely with liquid manure. The earliest winter-flowering *Heaths* and *Epacris* must soon be placed under glass, as it will forward their blooming. Where *Camellias*, *Chinese Azaleas* and the hybrid Indian *Rhododendrons* were not potted in the spring, and require shifting, the present will be the most favourable time, as the young wood is now becoming somewhat firm, and the flower-buds are perceptible. As this class of plants require water very liberally during their period of growth, drain the pots well, and use very turfy peat and sand, adding an equal portion of fibrous loam for the *Camellias*. Plants of *Brugmansia*, whose period of blossoming has passed, may be closely pruned. If drenching rains occur, any tender plants which are likely to suffer damage should be taken in-doors again; there is no occasion to house the whole stock at once. Plants impatient of moisture should not be kept out too long, the solar heat will soon become much diminished and the nights are lengthening, and, of course, evaporation will proceed at a slower pace.

STOVE.

Plenty of moisture to the atmosphere, and plenty of air are still the essentials, increasing the ventilation progressively as the plants approach towards the next period, and inuring them to much more sunlight in a similar ratio, at least those which have made a strong and early growth; shading will, of course, be dispensed with, except in case of bright sunshine during the middle of the day. Pay every attention to such superior stove plants as *Allamandas*, *Dipladenias*, *Stephanotis*, *Echites*, *Euphorbias*, *Luculia*, &c.

PITS AND FRAMES.

Some of the first-struck cuttings will now be fit for potting-off; place them in a pit or frame, shade and keep them close until they are well rooted, when they should be set out to harden previous to being stored for the winter. Continue to put in cuttings, more particularly the best kinds of bedding *Pelargoniums*, which ought to be struck as soon as possible.

W. KRANK.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

STILL a burning sun and no water; and we have, therefore, been obliged to suspend all planting operations. Left yellow-haulmed Peas full of produce, that they might shade Cauliflowers and other crops. Shaded slightly what little we attempted to plant or sow, and worked a Dutch hoe over the whole surface of the ground, alike to cut up incipient weeds and keep moisture from evaporating. Gave a little water, and only a little, to beds of Endive, Lettuces, Cabbages, Chicory, &c. If this weather continue we expect we must fall back on Chicory and Dandelions for winter salad. We have put down in our memory some outlying corners by the sides of roads where the Dandelion is plentiful, in case it might be needed. With earth like kiln-dried dust, and water driven a long distance for the supply of cattle, it is vain to expect any for the kitchen garden. We fear that pot plants will also have to go to the wall.

FRUIT GARDEN.

General operations much the same as the last. Wasps are now exceedingly troublesome, clearing off netted pieces of Gooseberries, and attacking Peaches, Nectarines, Plums, &c., in the orchard-house. They have come in on us suddenly like a flood, and are much smaller in size than we ever recollect seeing them before. In the spring of this year we never saw so many, so strong, and so wild, the wildness pre-

venting so many of them being caught as would otherwise have been the case. For about ten weeks not a wasp was to be seen, and now we have them in shoals. We have taken multitudes of nests, and mostly at a good distance from us, and many by the sides of highways. In some cases the wasps were stupefied with powder and sulphur before being dug out. In most cases tar was poured into the holes, a little of which stupefied them, and, in many cases, killed all that were in the combs at the time. We have gone to these tarred places, and never found a wasp returning to seek the old nest. When taken in the old way, it is a good plan to sink in the ground a bottle of water, or sour beer, leaving only the hole at the mouth open and level with the ground surface. We have taken bottles half full of wasps by this process. Old wide-mouthed bottles, half filled with enticing liquor, are also good traps, and so is the double hand-light. A common hand-light is set on bricks, with a basin of beer and decayed fruit underneath it. A hole is left in the top of the glass, another hand-light without any holes in it is placed over the first, and the part where they join stuffed with moss, clay, &c. The wasp, after feeding, flies upwards, and roams about until it finds the hole in the lower glass, through which it passes, but never returns again. Some upper glasses already contain many hundreds if not thousands. We have tried poisoning them, but with no great success.

Ants, also, have become annoying on Apricots, &c., out of doors since the dry weather. We cannot settle them as we used to do for want of water to syringe or engine with. A repeated hard engining of an evening with clear lime water would bring almost the whole of them for shelter to the bottom of the wall, and then we used to prevent their re-ascending by running a band, 2 or 3 inches wide, of tar and oil near the bottom of the wall. The oil prevented the tar from drying. The orchard-houses were almost entirely cleared of ants before the fruit ripened, by strewing some guano on the floor, and chiefly by the side of the wall, and then watering all over with sewage water. The ant hates anything containing ammonia. Clear lime water will often cause them all to sheer off, especially if there is much organic matter in the soil. Though small, they are very destructive in numbers, and should be kept down. They will eat sugar and water with arsenic in it greedily, and soon their existence is settled. We used to place it in little saucers with a bit of wood across, leaving room enough for the ants to enter, then placed another saucer above, and a stone on the top to keep it in its place. When exposed, cats and dogs will be enticed to the mixture. All such poisonous matter should be used with great care. Let us advise all fruit-eaters to beware of what may be in the smallest hole. Unfortunately lives have been lost by swallowing a wasp, and we have known cases where the throat has been much swelled by inadvertently swallowing an ant.

Hexagon netting, and coatings of wool, or cotton wadding will keep out wasps from fruit; but unfortunately all such remedies, by injuring flavour, are deprived of part of their value. For regular houses the best plan is to put gauze over all the ventilators, and then they cannot get in.

For all matters relating to fruit we must refer to previous weeks. We have trouble enough to obtain water to keep Strawberries in pots going on, and for fruit in houses we are obliged to shade more than we like, to lessen evaporation.

We have delayed cleaning the Strawberry rows and quarters, as the runners and old leaves help to shade the ground, and we found the part which we had cleaned and exposed suffered the most from the drought. Apples, though a heavy crop, will, we think, be smaller than usual, owing to the drought. Morello Cherries on north walls, owing to receiving little sun, have been very fine, and the most forward and blackest have been gathered for brandy and bottling, to keep them from the wasps that had begun on them. Melons and Cucumbers we have been obliged to shade more than we like; and pots in the orchard-house, in addition to mulching, we have strewn over with hay and litter, to lessen evaporation.

ORNAMENTAL DEPARTMENT.

Gave a little more air to the small stove, as the moist floor was causing a few of the plants to damp, but we wanted to save watering the individual pots as much as we could, by

giving them an atmosphere in which they were forced to absorb pretty well as much as they perspired. Shaded conservatory with whitening, and kept the floor and stages moist for a similar purpose as in stove, having proved that by such means much less water would be necessary than by giving more air and light and watering each plant as it required it. Shaded all freshly potted plants, as *Cinerarias*, *Primulas*, and *Geraniums* for a similar purpose; and even with plunging will have difficulty in keeping *Chrysanthemums* growing on healthily. Out of doors it is amazing how well many of the flower-beds look. *Calceolarias* are yet pretty fair, and *Geraniums* would be magnificent but for the brown lawn by which they are surrounded. The ground being so dry we fear that a thunderstorm will pretty well dash off the carpet of bloom; but if it does so it will enable us to proceed with our kitchen cropping. What have suffered chiefly are *Salvias* and *Dahlias*, both of which we have been compelled to leave to their fate, as not a drop of water could be given them. It may be trying enough to have a constant dripping atmosphere; but it cannot be so worrying as seeing things dying for drought and no means of averting the ruin.

Our work has chiefly been threefold. First, switching over the lawn with the daisy-knife to cut down any bits of *Lotus*, *Bent*, or *Plantain*, that in various colours raised their heads above the level of the rusty-brown lawn; and, secondly, picking off lots of the exhausted flowers, and moving with a small Dutch hoe every bit of space round the beds, or any little spot among the plants where the hoe could have access, and except at the verge there are but few places where a three-inch hoe could get in. Wherever the surface can be moved it so far acts as a cooling to the plants, and if a shower should come it will go in instead of run away over a hard surface. These little hoes act as hoe and rake; the forward move loosens the surface, or just moves it when loose, and the back stroke makes it as level as any rake would do. For all general purposes in a flower garden as respects the beds, we never allow a rake with its horrid teeth to be used. In all picking, hoeing, &c., we clean as we go, allow no heaps to be formed, to have the pleasure of going afterwards and taking them up, and sweeping and cleaning the bottom of each heap. We recollect in our young days trying how smoothly we could rake a flower-bed, and calling it "dressing" and "high keeping." If the work is taken in time and there is not much to remove, the hoe will leave all in better order as respects encouragement to growth in a fifth part of the time. Then what lots of plants are injured and torn up by the teeth of even a small iron rake! The best plan is to lock rakes up and keep them for some very particular purpose indeed.

The third sort of work has been putting in lots of cuttings after the *Verbenas*, following with *Scarlet Geraniums*, &c. These are mostly placed in moveable wooden boxes, at perhaps a trifle more than an inch apart; and though they would do well enough in the open air in ordinary circumstances, yet as we wish to keep up the regular outline of our beds, and therefore select very small bits for cuttings, and besides have little or no water to give them, we place the boxes under shelter of some kind, such as old sashes, tiffany, calico, &c. Thus it is well to suit our operations to our circumstances. The principle of adaptation cannot be too much studied or acted upon.—E. F.

COVENT GARDEN MARKET.—AUGUST 20.

The market continues to be abundantly supplied, both with home-grown and foreign fruit; and vegetables are sufficiently plentiful notwithstanding the drought. Lemons, being scarce, have again advanced in price.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples.....	$\frac{1}{2}$	0	1	6	Mulberries	punnet	0	6	to 1
Apricots.....	dox.	1	0	3	Nectarines.....	dox.	2	0	6
Cherries.....	lb.	0	6	1	Oranges.....	100	12	0	20
Currants, Red...	$\frac{1}{2}$ sieve	3	0	5	Peaches.....	dox.	4	0	10
Black.....	do.	4	0	5	Pears (kitchen)...	bush.	0	0	0
Figs.....	dox.	2	0	3	dessert.....	dox.	2	0	3
Filberts & Nuts per lb.	0	9	0	0	Pine Apples.....	lb.	3	0	5
Gooseberries...	$\frac{1}{2}$ sieve	1	0	3	Plums.....	$\frac{1}{2}$ sieve	2	0	4
Grapes, Hamburgs lb.	1	6	4	0	Quinces.....	do.	0	0	0
Muscats.....	3	0	6	0	Raspberries.....	lb.	0	6	1
Lemons.....	100	12	0	20	Strawberries...	punnet	0	0	0
Melons.....	each	1	6	5	Walnuts.....	bush	14	0	20

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes.....each	0	4	0	6	Leeks.....bunch	0	4	0	6
Asparagus.....bundle	0	0	0	0	Lettuce.....score	0	9	1	6
Bacon.....doz	2	6	0	0	Mushrooms.....pettle	1	0	2	6
Beans.....doz	2	6	4	0	Must. & Cress, punnet	0	2	0	4
Beet, Red.....doz	1	0	3	0	Onions.....bunch	0	4	0	6
Broccoli.....bundle	0	0	0	0	Pickling.....quart	0	6	0	8
Brussels Sprouts.....doz	0	0	0	0	Parley.....doz. bunches	2	0	4	0
Cabbage.....doz	0	0	1	6	Parasips.....doz.	0	9	1	0
Capelums.....100	3	0	5	0	Pears.....quart	1	0	1	6
Carrots.....bunch	0	5	0	8	bushel	7	0	0	0
Cauliflower.....doz	3	0	6	0	Peas.....bushel	3	0	5	0
Celery.....bundle	1	0	2	0	Radishes doz. bunches	0	0	0	0
Cucumbers.....doz	0	6	1	0	Rhubarb.....bundle	0	0	0	0
.....pickling.....doz.	1	0	3	0	Savory.....doz.	0	0	0	0
Endive.....score	1	3	2	6	Sea-kale.....bushel	0	0	0	0
Fennel.....bunch	0	3	0	0	Spinach.....sieve	2	0	4	0
Garlic and Shallots, lb.	0	8	0	0	Tomatoes.....doz.	1	0	3	0
Herbs.....bunch	0	3	0	0	Turnips.....bunch	0	4	0	6
Horseradish.....bundle	1	6	4	0	Vegetable Marrows doz.	1	0	2	0

TRADE CATALOGUE RECEIVED.

William Paul, Paul's Nurseries, Waltham Cross.—*Select list of Hyacinths, Early Tulips, Gladioli, &c.*
Cutbush & Son, Highgate.—*Bulb Catalogue for 1864.*

TO CORRESPONDENTS.

* * We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

GERANIUMS (*A Subscriber*).—From the state in which the petals were when the blooms arrived the determination of the names was impossible.

APPLES DESTROYED (*M. F. H.*).—The leaves are infested with a kind of aphid, which is very prevalent, and equally difficult to destroy, and which does most injury on the under side of the leaf. Smoking the house with tobacco is of little use unless the house be filled with smoke to the floor, for immediately the least smoke is felt they drop on the floor and are then out of harm's way. Tobacco smoke will certainly kill all it touches; but the most effectual remedy is to syringe the plants with quassia water made by boiling 4 ozs. of quassia chips in a gallon of water for ten minutes, and while cooling dissolve in it 4 ozs. of soap. The plants syringed with this, or the leaves and shoots dipped in it, will soon be cleared of the pest. It may be necessary to repeat the operation. Probably the roots are in too rich soil and too deep, and this would cause an imperfect ripening of the wood. We do not feel in a position to express an opinion on the border unless we had details as to its depth and width, and the situation of the roots in it, with the age of the trees. If the trees are young and the border not deeper than 2 feet, we should wait another year and see what effect a season like this will have on maturing the wood.

CONTRIBUTOR ERADICATING (*Ignoramus*).—If you persist in digging up the roots of every plant as it appears, and never allow a leaf to remain a day without the root belonging to it being dug up, you will find your perseverance will enable you to completely overcome this weed, and a thorough drainage of the land will also assist in doing so. You will find directions for keeping Geraniums, Verbenas, and Calceolarias without heat in Vol. VI., page 447.

WIRE PLANT-STAND FOR WINDOW (*E. D.*).—We fear you have again allowed another error to creep in. Should it not be 3 feet 11 inches long, 1 foot deep, by 1 foot wide? If so, you will have room for two rows of 24 or six-inch pots, and by consulting a wireworker he will suggest many designs without the carpenter being at the trouble and you the expense of his carving one in wood. You may have the bottom of zinc, and have wirework for the pots to fit into. The wireworker will tell you what will be suitable, and make the stand according to your directions.

FRUIT-HOUSES (*G. W. F.*).—We would call a house for Fig trees a Fig-house, one for Orange trees an orangery; but figery would be equally proper though not customary.

DUTY OF CARET (*De Poir*).—Any nurseryman who has a good stock of herbaceous plants could supply it.

ELEPHANT'S FOOT (*An Under-Gardener*).—From your description we have no doubt that your plant is *Testudinaria elephantipes*, which is known as Elephant's Foot or Mottentot's Bread. It is a deciduous climber attaining a height of 8 feet, and a native of the Cape of Good Hope. The leaves are reniform and entire; and the rootstock is a large fleshy mass covered with a rough cracked bark, and is used by the Hottentots in times of scarcity as a sort of Yam. It is mentioned in the "Cottage Gardener's Dictionary" under the head of *Testudinaria*. The genus *Elephantopus* is also known as Elephant's Foot. Little David Geranium belongs to the *Zinnia* class.

EVERGREEN SHRUB FOR POND (*Forkshire*).—What reason have your friends for obtaining their Roses from Antwerp, and Pears, Apples, &c., from France? We are quite sure that you will be quite as well served by any of the English nurserymen, taking correct nomenclature and quality into consideration. We know of no evergreen plant better suited for a pond than the evergreen Thorn, *Crataegus pyramidalis*. *Crataegus crenata* is, if anything, more handsome, and produces larger fruit in mid-winter. There are red and white-berried varieties.

MOSS ON FLOOR OF STOVE (*Toby*).—Sprinkle the floor with sand, after thoroughly wetting it, and then brush it heavily with a brush three-parts worn. Continue to scrub it, adding more sand and water, until the whole is thoroughly clean. It will take some time to clean it. Salt made into a strong brine by the addition of water will kill the moss, but will also kill the roots of everything it comes in contact with, and has the disadvantage of making the floor appear always damp. We know of no safe cure except scrubbing at frequent intervals.

VERBASCUM BLATTARIA—CYTHOLOSUS (*T. Theobald*).—Your plant will doubtless flower next year. Any of the large nurserymen near York could, we imagine, supply you with a plant of the common House's Tongue.

TACSONIA MANIGATA AND BIGONIA JASMINOIDES NOT BLOOMING (*J. J.*).—We think neither of the plants named have had their wood sufficiently ripened in the preceding summer to allow of their blooming in the succeeding year. Pot them in a compost of turfy loam one-half, leaf mould and sandy peat the other half, with a free admixture of silver sand, providing good drainage to at least one-fourth the depth of the pots. Place the pots as near to the front of the greenhouse as practicable, and train the shoots to wires, fixed so as to be about 9 inches from the glass. Keep well supplied with water whilst the plants are growing, but towards autumn gradually diminish the supply, and keep the soil moderately dry during the winter, and the shoots moderately thin. Your plants ought to bloom in the following year. Now is a good time to sow Fern spores.

CUCUMBER-PIT OR HOUSE (*An Amateur*).—For the mode of connecting small pipes with large ones, we refer you to the admirable letter of "AN AMATEUR MECHANIC." We have several times recommended the same plan, but the experience of our correspondent is none the less interesting. Had you stated the particulars of your fallacies with your tank, we might have been able to have helped you. A tank 18 feet long, 2 feet 9 inches wide, and 5 inches deep, formed of wood and covered with slate, ought to have grown three-rows Cucumbers in a low house or pit, if care were taken that the roots were not barked, and also that from the surface of the tank a dry or a moist heat at will could be carried into the atmosphere of the house. If there were no means of top heat except through the soil, then we can easily imagine how the soil might be too hot and the air too cold. We have several times given plans for pits for Cucumber-growing. A very good one on a small scale would be, height at back 8 feet, in front 4 feet, width 7 feet, bed 4 feet in width, path from 2½ feet; two four-inch pipes below the bed, surrounded with clinkers, for bottom heat, two above bed for top heat, plants trained at least 16 inches from glass. In your proposed position you would, of course, form a house, and that would be much better. You do not say what is the height of the gable against which the house is to be placed; but presuming it is 14 or 16 feet in height, we would adopt either of these heights for the back wall; and for 10 feet in width we would make the front wall from 3½ to 4 feet in height. This would give a fine slope either for early Cucumbers or early Vines. Then for Cucumbers we would shut off a pit—say 3½ or 4 feet wide, and 2½ feet in height, the outside wall forming one of the boundaries. Then we would place two four-inch pipes at the bottom for bottom heat, and one in front returning by the back for top heat. The bottom ones we would surround with clinkers, the top one in front to be opposite the ventilators in the wall, roof fixed, and a small hinged ventilator along the top—say a foot wide. Trellis 16 inches from the glass. For very early Cucumbers three pipes would be required for top heat. The back of the house could be devoted to many purposes. Such a house with different arrangements would do either for Cucumbers or Grapes, but not well for both at the same time. See an answer about Melons and Grapes.

VINEY WITH MELON-PIT (*H. R. B. P.*).—We think we recollect your case and what we said about it; but you should have referred us to page and column, as we have turned up several Numbers, and without finding what we wanted. We will do the very best for every correspondent as the time; but it would be impossible for us to retain individual cases in our memory, and our friends should not give us unnecessary labour. We sometimes receive polite requests as to what volume such and such articles are to be found in, but we decline to do that for our readers which they could so well do for themselves. Now to the questions of our worthy correspondent. 1. You may plant the Vines outside, with the certainty of ripening good Grapes in June if the house is spouted and the border protected with litter and tarpaulin. As stated lately, if put on soon enough—say in the middle of October—dry litter or fern will be better than dung, just because it is safer and easier to keep in the heat of the soil than to send heat into it when it has been cooled. 2. You could grow Melons or Cucumbers in a pit in the centre of the house, and you would do so earlier and better if you had lights to lay over the pit or frame. These lights would enable you to afford a high temperature, or otherwise, to the plants in the bed, when you might be merely starting and breaking your Vines, and when a high temperature for them would be unsuitable. We have grown fine Melons in such positions, especially when the Vines were young. Whilst your Vines were young you might so employ your pit for a year or two with advantage, if you looked after insects. You might continue to do so if you kept your Vines from 4 to 6 feet apart, and were very careful as to insects. If for the sake of abundance of Grapes you pretty well covered the roof with foliage, you would do little good with the Melons under the shade, and they would be more apt to be troubled with insects. In fact, owing to the likelihood of insects, we would give up the use of the pit for anything except a few early things, after the Vines were fully established. 3. You will have abundance of heat from your fire, and therefore for Melons will want no ashes, after the heat of the house ranges from 65° to 70° with fire heat. The size of the flue is very good. For early work you had better have pans on it for evaporating moisture, until your crops approach the ripening state. 4. We think your ventilation will be sufficient, but, to make sure, you had better have a little piece made to open in the end of the house close to the apex.

MUSHROOMS (*An Amateur of Six Months*).—If you send us your address, together with four postage stamps, the Number which you require will be forwarded to you.

STEDDING GERANIUMS (Stella).—All the Geraniums named are best, according to what you require. Glendinning's Scarlet is a strong grower and good. Vivid is also good, and between that and Frognore Scarlet in height. Then Frognore there is no better dwarf free-blooming variety, unless, perhaps, what was a sport from it, the Variegated Brilliant. Trentham Rose, as you remark, is very fine. In this dry weather it is apt to become a little seedy—that is, the trusses will sooner become trusses of seed. Trentham Scarlet is nearly as strong in habit, a good orange scarlet, and, therefore, quite distinct from Trentham Rose, which is a rose. A good neighbour to Trentham Rose would be Rubens, which is a waxy pinkish rose, and endures hot dry weather rather better than the Trentham Rose. Baron Hissell is very fair for bedding if not too much exposed. As you sign your name "Stella," we presume you appreciate that variety, of which one of our best gardeners, on looking at a fine line of it, said, "It kills everything else."

SELECT FANCY PELARGONIUMS (Nottinghamensis).—Cloth of Silver, Acme, Ellen Beck, Roi de Fantaisies, Lady Craven, Udine.

SELECT VARIEGATED-LEAVED GERANIUMS (Idem).—Mrs. Pollock, Flower of Spring, Bijou, Italia Unita, Cloth of Gold, Shottesham Pet.

WINTERIA SINENSIS (F. A. C.).—The second flowering of this is by no means universal in hot dry seasons like the present.

FLOWER-GARDEN PLAN (A. Constant Reader).—We have no doubt the garden will look very well. We presume there are straight lines at the back as well as at the railing, and that may be the reason for having the square figures at the four corners. That, however, is no reason for making these clumps a mere narrow border, round what, we presume, is a square of grass inside. The narrowness of that border will make the planting insignificant in effect compared with the other clumps. Supposing these squares were left as they are, or made into true squares, we would certainly fill up the centre as well as by digging the grass down. Then to work in your plants, and make the desirable variety, we would leave 1 as you propose, Tom Thumb edged with Gnapallium; 2 and 3, White Verbenas, with a rim of Heliotrope; 5 and 6, Yellow Calceolarias, mixed or centred with Ageratum; 4 and 6, Scarlet Verbena and Purple King; 7 and 8, centre Gazanias, and broad band of Lobelia speciosa. Your garden would then be all of a piece, now your 4, 6, 7, 8, will look mean beside the others. There is nothing artistic in the beds, you would see how a small square at Putteridge was laid out and planted, and numbers of other plans have been given. However, your simple plan will look well if well planted.

FORCING PEACHES FOR MARKET (J. D., Exeter).—Grow Royal George and Grosse Mignonne Peaches.

BELLE DE DOUCÉ PEACH (W. M.).—The Peach which you have under the name of Monstrueuse de Doucé is doubtless the same as Belle de Doucé, which is described in the "Fruit Manual" as follows:—"This is a fine large melting Peach, an early variety of Bellegarde. It is of first-rate quality, with a vinous and richly-flavoured flesh, which separates freely from the stone. Glands round; flowers small. Ripens in the last week of August and beginning of September."

STOCKS FOR GRAFTING VINES (W. M.).—We still think the Black Hamburgh is the best stock. The Muscat is often much stronger-growing, but it is more tender. It is as well to graft white kinds on whites, and black on blacks, though it does not much signify. In some few cases strange facts have come to our knowledge of stocks influencing scions, and, in the case of Grapes more especially, scions influencing stocks—so strange, that without greater corroboration we decline publishing them. We have never seen any bad effects as to setting from grafting on the Muscat.

ALPINE STRAWBERRIES (F. E.).—They require the same treatment as to manuring the ground, and general culture, as Strawberries generally. They are best raised from seed, which if sown in a pan in any light earth in March, and placed in a mild bottom heat, will come up in a few days, and should then be removed to a cold frame to harden-off. If due attention be paid to watering, the plants will grow rapidly, and when of sufficient size to transplant they should be planted out in beds, allowing 1 foot between the plants every way. Seed sown in spring usually furnishes plants for late autumn bearing, and the runners of the previous year planted in March or April bear abundantly early in autumn. The ground in which they grow should be well watered in hot dry weather, otherwise they soon cease bearing, and become weak. It must be kept moist in order that they may bear constantly.

SELECT ROSES (Idem).—Madame Louise Carique, Souvenir de la Reine d'Angleterre, Triomphe d'Angers, Géant des Batailles, and Madame Trudoux, are strong-growing free-blooming varieties.

STOCKING POTATOES (W. W.).—It is a good plan to spread them rather thinly in a dry place, or airy shed, for a fortnight or three weeks prior to planting. Greening them by letting them lie on the soil for some days does harm. Your plan will answer, and you may cover them with straw now, with a few spadeful of soil here and there to prevent the straw blowing about, putting on more soil as the frosty season approaches.

PORETTIA FULCHERRIMA (Nottinghamensis).—It may be kept in a conservatory at 45° in winter when it is blooming, but it cannot be grown in such a house successfully without more heat at the growing season.

GOLDEN FLAME GERANIUM (Calcearia).—If you take up the plants now you will only spoil the appearance of the bed for the remainder of the season. The plants will droop and lose many of their leaves if taken up and potted now; but if you leave them alone until the beginning of October, and then pot them, reducing the heads a little, you will find they will do well in a cool greenhouse, only do not give them too much water.

REMOVING A GREEN GASK PLUM TREE (P. Q.).—If your tree can be taken up with a good root, with plenty of fibres attached, it may be safely removed, but success greatly depends on the care with which the operation is performed. The tree should be removed when the leaves begin to fall in the autumn, and it should fruit the second year after removal, probably the first, but in the latter case it ought not to be allowed to bear much.

NAME OF FRUIT (T. H. R., Dorset).—We do not know the Pear you sent. It is a very beautiful and a very delicious one, and we should like to know where you got it from, and any particulars concerning it.

GUANO WATER (An Amateur Gardener).—From 1 to 2 ozs. of guano to a gallon of water is quite sufficient.

NAMES OF PLANTS (F. R. P., Bickley).—*Viburnum lentago*. (C. A. M.).—*Linum grandiflorum* var. (W. A., Hastings).—*Phyllitis epipactis*. (Maryle).—1, *Vicia hirsuta*; 2, *Trifolium repens*; 3, *T. medium*; 4, *Malospyrum japonense*. (D. E.).—*Phytanthus albens*. (J. W.).—*Veratrum nigrum*: a native of Central and Southern Europe, and Siberia eastward to Japan. You will find a good figure of it in Ratschenbach's "Icones Flos Germaniae," vol. 2.—J. W. P., must send a flowering specimen of his *Justicia*. (E. B.).—1, *Beloperone plumbaginifolia*, var. *angustifolia*; 2, *Achimenes pedunculata*. (Geo. Maples).—*Oncoclea sensibilis*.

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

COOKERY AGAIN.

A good friend of ours, who knows we sometimes rush into print, advises us to advertise our capabilities in the way of producing sleep. He says if they were better known some of our papers would be a real blessing to bad sleepers. He describes their effect on himself as most soothing and delightful; a dozen lines make him yawn, twenty-four make him nod, and the entire article produces the calmest sleep he ever has. Some good in them at all events.

It is said "No lady who deals in the finny tribes ever declares those she has are in a state of semi-decomposition," and it therefore stands to reason we like our papers greatly. We are, however, bound to say there are some we like better; for instance, those of a "WILTSHIRE RACTOR." We have no doubt he is the head of a happy family. Few things escape him. We liked his paper on "Rooks," but we do not like rook-pie. It may be prejudice, or it may be the foolish idea that they are unclean feeders, but we think it a shame and an insult to good rumpsteak to bake it in such company. We like a chicken peddler; it is a boon in hot weather, and a resource in the summer; it is a valuable adjunct at the luncheon and in moderate families where there is but one dinner per diem, and that in the middle of the day. It is a favourite with us. We are compelled to be practical, and have long since tried to find a profitable side to our hobbies. We breed many chickens, and of course some of them are faulty. We shut our ears to all the entreaties to keep this one, because it is so funny; that one, because it eats out of your hand; and another, because it runs all on one side. We shut our ears to the many "attenuating circumstances" the juvenile advocates discover, and when two or three arrive at the size of pheasants we condemn them to the pudding.

Recipe. Let the chickens be fasted and killed. At the end of twenty-four hours cut them up. Do it cleverly. Cut off the wings at the first joint from the body. Take a sharp knife, and, beginning at the end of the breastbone, bring it down in one clean cut to the wing joint on each side; this gives two wings. Take off the merrythought; remove the legs and divide them, giving the thigh and the drumstick. Let the carcasses lie sideways on the table, and divide it from end to end, separating the back from the breast; cut the back in half, crossways, and flatten the two pieces; serve the breast the same. Season according to taste. Take some mild bacon, and cut very thin slices. Make a suet crust, put it in a basin, place your joints of chicken and a few slices of bacon in the basin, tie it up in a cloth, and boil slowly for a long time. Turn it out when done. Chickens that are too small to roast and boil are very nice eaten in this way. To those who like the flavour, the addition of a couple of kidneys is an improvement.

Reverens à nos Rooks. We think we recollect a paper anent them in the *Spectator*. A good gentleman living in Lincoln's Inn Fields passed much of his time at his window watching them. Observing how frequently they fell to the ground and died, although apparently in perfect health a few minutes before, he was about to read a paper before a learned society, proving that they were very subject to apoplexy, when making the acquaintance of an idle young fellow on the opposite side of the square, he found he was in the habit of shooting them with an air gun.

There is something to be learned from everything that is created. Birds are no exception. A Goose is said to be stupid; but try your best, and you cannot drive over one, though the road may be full of them. All birds are observant. If you have a large cageful, and are accustomed to go into it every day, they will know you, and see you without fear.

If, however, you want to catch one, and have to use a net, you will soon see the effect. From that day, if you go without the net, the birds are careless of your presence. If you take the net, every bird will try to escape you. If you have a smaller cageful of birds, and have occasion to catch some by hand now and then, if there is one spot where you cannot reach them, every bird will crowd there, and nothing will make them leave it.

THE AGRICULTURAL HALL POULTRY SHOW AND THE POULTRY CLUB.

In replying to your correspondent, Mr. George Manning, I feel thankful that we members of the Poultry Club are not in any way responsible for prize lists, or the getting up of shows, as the Honorary Secretary, Mr. Tudman, very properly informs him; for if this were the case the sooner we take advantage of a recent Act and become a Limited Liability Company, the better. A show undoubtedly can be under the patronage and management of the Club without the Club being answerable for the prize list.

In the course of a week or two, I am told, your correspondent will, on referring to a contemporary, have his curiosity satisfied as to the objects of the Club: but I, for one, object to any non-member being supplied with rules, for which I, with other members, have had to pay. Mr. Manning appears to question the proceedings of the Club. Surely he could afford half a guinea (one year's subscription), and have had all the information he desired, and thereby avoided making what appear to me unjustifiable assertions.—THOS. HUGHES.

ORMSKIRK AND SOUTHPORT AGRICULTURAL SOCIETY'S POULTRY SHOW.

THE eighth annual Show of the above Society took place on the 17th inst., at Southport, on a plot of land in Portland Street, abutting on the Lancashire and Yorkshire Railway. There was a considerable falling off in the number of entries as compared with former years; but, although deficient in number of entries, there was no falling off in the quality of what was exhibited.

DORKINGS.—Prize, J. Blundell, Burscough. *Chickens.*—First and Second, H. Blundell, Southport.
SPANISH.—First and Second, R. Teebay, Fulwood, near Preston.
GAME (Black or Brown-breasted Red).—First, C. W. Brierley, Rhodes, House, Middleton. Second, J. Eaves, Knowsley. *Chickens.*—C. W. Brierley.
GAME (Of any other kind).—First, C. W. Brierley. Second, J. Eaves.
HAMBURGERS (Golden-pencilled).—First, C. W. Brierley. Second, T. Ridgway, Burscough.
HAMBURGERS (Golden-spangled).—First, C. W. Brierley. Second, T. Ridgway.
HAMBURGERS (Silver-spangled).—First, R. Teebay. Second, T. Ridgway.
COCHIN-CHINA (Buff).—First and Second, T. Stretch, Ormskirk. *Chickens.*—First and Second, T. Stretch.
COCHIN-CHINA (Partridge or Grouse).—First, C. W. Brierley. Second and Highly Commended, T. Stretch. *Chickens.*—First and Second, T. Stretch.
GAME BANTAMS (Black or Brown-breasted Reds).—Prize, C. W. Brierley.
GAME BANTAMS (Any other colour).—First, C. W. Brierley. Second, T. Ridgway.
BANTAMS (Any other variety).—Prize, T. Ridgway.
GAME COCK (Any colour).—Prize, C. W. Brierley.
GAME BANTAM COCK.—First, J. Barry, Burscough. Second, C. W. Brierley.
GESE.—First, J. Bryers, Ormskirk. Second, H. Blundell, Southport.
DUCKS (Aylesbury).—First, T. Stretch. Second, J. D. Weaver, Southport.
DUCKS (Any other variety).—Prize, C. W. Brierley.
TURKEYS.—Prize, C. W. Brierley.
JUDGES.—Mr. Joseph Hindson, Barton House, Everton, and Mr. Burnett, Hutton, near Preston.

WAKEFIELD POULTRY SHOW.

THE third annual Exhibition took place at Wakefield on Saturday the 13th instant. Financially, we are glad to say the Show was a great success, the weather being delightfully fine, and, we believe, about 4000 visitors were present. The poultry were not so numerous as we expected; but now that the Hon. Sec., Mr. John Crosland, jun., has means at command, we have no doubt his schedule for next year will assume a better shape, for as poultry is certainly not the least interesting part of the gathering, a fair proportion of the prize money will be allotted to this department. Under

Mr. Crosland the Show was admirably carried out in every respect.

In *Game* the first-prize Black Reds were unusually good, and shown in splendid condition, well deserving the special prize of the silver cup for the best pen in the Show. In the same class a good Brown Red cock was accompanied by a hen minus one claw. *Game chickens* were very good. In *Cochins* Mr. Bishop had both prizes with Bufts such as are seldom seen at a local show. Mr. Lacy's *Brahmas* also deserve notice, and added another to that gentleman's honours. *Dorkings* were good, but out of condition. *Hamburgs* were only moderate. *Game Bantams* were particularly good, Mr. Crosland proving his immense strength in chickens, all of which were first class, and will no doubt be heard of again. In *Ducks* the Rouens were excellent.

The following is the prize list:—

GAME (Black-breasted and other Reds).—First and Cup, J. Crosland. Second, G. Helliwell. *Chickens.*—First, Second, and Highly Commended, J. Crosland.
GAME (Any other variety).—First, G. Helliwell. Second, G. Crosland. *Chickens.*—First, J. Crosland. Second, J. D. Newsome.
SPANISH.—First, R. T. Wood, Clark's Villa Tower, Crumpsall, Manchester. Second, J. Siddall, Rhodes Street, Halifax.
COCHIN.—First and Second, C. T. Bishop, Lenton, near Nottingham. Highly Commended, J. Crosland, jun. *Chickens.*—First, Messrs. Bawn and Briggs, 5, Royal Parade, Harrogate. Second, G. Crosland.
BRAMA POORNA.—First, H. Lacy, Hebden Bridge, Yorkshire. Second, C. Lister, Mirfield.
DORKINGS.—Prize, T. E. Kell.
HAMBURGERS (Golden-spangled).—First, H. Carter, Upperthong, Holmfirth. Second, J. Ellis, High Court Lane, Leeds.
HAMBURGERS (Silver-spangled).—Prize, J. Crosland.
HAMBURGERS (Golden-pencilled).—Prize, J. Crosland.
HAMBURGERS (Silver-pencilled).—First, D. Illingworth, Burley, near Otley, Yorkshire. Second, G. Helliwell.
POLANDS.—Prize, H. Carter, Holmfirth.
ANY OTHER BREED NOT BEFORE MENTIONED.—First, C. Lister, Mirfield. Second, J. Ellis.
BANTAMS (Game).—First, Highly Commended, and Commended, Master C. Crosland. Second, J. D. Newsome, Batley.
BANTAMS (Black or White).—Prize, Miss M. A. Crosland.
BANTAMS (Any other variety).—First, W. J. Cope, Barnsley. (Pekin.) Second, J. D. Newsome, Batley. (Cochin China.)
DUCKS (Aylesbury).—First and Second, — Hollings.
DUCKS (Rouen).—First, J. Hirst, Byne Hill. Second, J. D. Newsome, Batley.

Judge of Poultry, Mr. W. Ludlam, Bradford.

MY BLACK BANTAMS.

THE very first paper which I sent to this Journal, now one year and eight months since, was devoted to the description and praise of those pretty pets, Bantams, especially Black Bantams, so, to make a bad pun, "I won my spurs with a charger of sootable colour." Having now further watched the habits of these interesting and useful little creatures, I crave a little more space from you on the same subject. First, I would notice their appearance—Let me describe that trim little cock, now, as I write, crowing on my window-ledge, giving me a saucy and inquisitive look, perhaps for more breadcrumbs, his dear delight, perhaps because I write glancing at him, and he therefore connects himself in some way or other, I know not bird process of reasoning, with me and my present vocation. How brilliantly red is his comb, especially when he is angry, that well-shaped comb, reaching far back in a peak; then his sparkling eye, and white ear-lobes, contrasting so well with his bright jet-black plumage. Then, again, what a beautiful hackle he has (I like much hackle in all cocks), it flows down his neck, over his shoulders it falls—so pointed and black is each feather, I compare it to nothing less than the "back hair" of some Spanish belle. Scarce less noticeable is his short curved strong beak, such a weapon of attack; then to complete him his silky-falling saddle, and his arched and flowing tail, and his whole body, especially his wings, glistening with metallic hues. Nor is the little fellow's figure, nicely poised upon his firm legs, less noteworthy, or that broad full breast, with head carried defiantly. Whether the poet Dryden ever kept Black Bantams I know not, but at any rate his description of the cock in one of his fables might lead one to suppose he did.

"High was his comb, and coral-red withal,
 In dents embattled like a castle wall;
 His bill was raven-black, and shone like jet;
 Blue were his legs, and orient were his feet;
 White were his nails, like silver to behold;
 His body glittered like the burnish'd gold."

Take him all in all I am inclined to think that a well-bred Black Bantam cock is among the very handsomest of our domestic poultry. He is, too, a very clean little fellow. It is our custom to breakfast daily in the study, but on Sundays we take that meal in the dining-room. I had, a few years since, a cock of this breed who came regularly to the window at eight o'clock, tapped with his beak (if not noticed he would go on tapping, letting us have no rest), and have his breakfast of crumbs. But when Sunday morning came, he would first make his appearance at his regular window, but, alas, no welcome tablecloth, with good things on it, was to be seen; he would then run round the corner of the house at full speed, with his head on one side, listening for the sound of voices, passing front door and drawing-room windows, and at the dining-room windows he appeared for certain, crowing, tapping, and confident that his appeal would be successful. This bird was the cleverest fowl I ever had—but, in passing, let me say, the more you pet poultry, the more of mind or sagacity do they reveal, but gradually cease to pet and caress, they return to mere fowls of ordinary type. This bird used to fly up to my children's heads or shoulders, stand on my foot and crow, and yet he was never vicious, the youngest bare-legged little child was no sufferer from his familiarity.

Next let me notice the precocity of the Black Bantam. I have now by me four chickens of this breed, hatched on the 10th of last May, also four Game chickens, Black-breasted Reds, I do not mean Game Bantams, these were hatched on the same day, consequently they are all just three months old, for I write on the 10th of August. Now the Game cockerel is only a long-legged gawky boy, with almost colourless comb and wattles, he has never attempted to crow, while the two black cockerels have crowed these six weeks, and now execute that adult accomplishment to perfection. They also walk with the hens, one is particularly fond of an old hen, and as I sent away my late cock, the master of the two cockerels is in all respects the Sultan.

I wish somebody could supply me with the pedigree of Black Bantams, for I find them more game than Game. For instance, my Game chickens are of a prize strain, willow-legged and all the rest of it, but the black cockerel not only drives off the Game pullets, but is totally master of the Game cockerel, leading him a wretched life, for, not content with giving him a peck and done with it, the little tyrant hangs on his wing, and punishes the poor long-legged boy terribly, he never daring to turn again. Of course there will be a day of fearful retribution presently, a turning the tables, a Nemesis, and my only fear is that the grand battle will end fatally, in case of no eye seeing the fight, for my brave little fellow will fight to the last, of that I am quite confident.

I know no one possessed of Black Game fowls, but I should like to try a cross between the two black kinds, Game and Bantam. A very nice little fowl would, I should think, be the result, and a profitable one too (and why not make pets profitable?), for the black pullets are excellent winter layers. I want to breed a fowl, laying well, and also a fair size. I should know I was eating a Black Bantam egg if I had my eyes shut, and then next in my estimation comes the Game fowl's egg. Now a cross would bring a bird with good points and properties, fit too for open gardens like mine; and every one should keep half a dozen little fowls, even if they have no separate yard. Can anybody help me in this matter? Good laying, good-looking, spirited little fowls, too small to scratch up a gooseberry bush, or even a scarlet geranium, would, I think, be welcome to many.

I have said nothing about the little black hens. Certainly I do not find them equal to the cocks in intelligence, but they are neat-looking birds, some of them good sitters, all excellent mothers. The pullets have charming little heads as they peer at one from a bed of potatoes. I also find that the colour of the hens, originally of a dull black almost brown, improves when you avoid breeding in-and-in.—
WILTSHIRE RECTOR.

PIGEONS' FOOD.

I HAVE kept Pigeons many years, ever since I could hold one, and having had some experience of the different kinds of grain as Pigeon's food, I should be glad to exchange

notes with other fanciers as to their opinions respecting the quality of various sorts of corn as food for Pigeons under different circumstances.

I have generally been in the habit of allowing my Pigeons to fly out for the greater part of the day, and under such arrangements I find most kinds of food are wholesome, and the Pigeons thrive well when they can provide themselves with lime, gravel, and green meat. They always had access to a bath in fine weather, and also to salt. Disease was then almost unknown among them. Now things are much altered, not altogether for the better. I am living on the top of a hill in a bleak situation; our water is from a well, very soft, and contains no lime. My Pigeons are high bred and tender, being Tumblers of different sorts—as Scotch, House, and Air Tumblers; Rollers; High-flying Tumblers, and Short-faced.

The House Tumblers and many of the Air Tumblers cannot fly, from their tumbling so much, while some of the Rollers if put on the wing will roll till they strike the earth, and would in consequence injure if not kill themselves, and for this reason my Pigeons do not have their liberty, except the High-flying birds and the young ones, which are let out once a day when weather suits. They fly for about two hours and then go in.

It will thus be perceived that under present arrangements a delicate breed in a bleak place, highly fed, and taking no exercise, must be liable to complaints unknown to a hardier race in a more natural and genial condition. I am in hopes of obtaining a better and more sheltered place, and so avoiding some of the difficulties. Still some persons may say, Why not keep a breed that can take care of themselves and so be let out? but every one to his own taste. I flatter myself I have a first-rate breed of Tumbling Pigeons and do not desire to change. I have now explained under what circumstances I have noticed the effects of various sorts of food.

TEARS are generally considered the best food for Pigeons. I must agree with Mr. Eaton when he says they are relaxing, and too much purging is not conducive to health.

BEANS.—Small old beans are by many declared to be the best of all food. I find them strong and warm, if I may so express myself. I cannot well succeed without them, yet I regard them as heating; the old Pigeons will breed too fast on them, the cocks drive to nest so determinedly that they neglect the previous hatch; and, moreover, beans do not readily make soft meat, and the transition from soft meat to beans is too sudden for delicate young Pigeons already weakened by neglect, consequently, many die.

PEAS are very nutritious food, much recommended for Pigeons to fly on; but I find if my Pigeons have many peas the hens lay soft eggs.

LENTILS.—I have not tried any of this food of late years, but when in Germany found it good, and it is highly nutritious.

VETCHES.—In France I fed my Pigeons principally on small grey vetches and liked them very much as food; but that is some years since, and I cannot compare them with present food.

WHEAT.—Very fattening and excellent for feeding young Pigeons on; but the old ones become fat, lazy, and soft-feathered on wheat.

BARLEY.—Very well as a mixture with peas, but I do not regard it as a good food, and the Pigeons do not seem to relish it.

BUCKWHEAT.—A very good addition, the Pigeons are fond of it, and I regard it as beneficial, but have not tried it much.

HEMPSEED.—Very fattening and exciting, and not good as a constant food; but useful in getting birds into condition or hastening pairing or breeding.

CANARYSEED.—I have a high opinion of this, but it is too expensive.

RICE bears a bad name, but I find it useful as a mixture to prevent diarrhoea, and think the Flying Tumblers fly better since they have had a little.

I should be pleased if any other fancier would compare notes and give me the benefit of their experience, either through the columns of this Journal or privately. It will be advisable to name the breed of Pigeons, whether in confinement or at liberty, how they are fed, and, what I regard as

of great consequence, the quality of the water they drink; for I think this is of much importance to a bird that drinks so copiously as the Pigeon, the water often containing various earths and salts according to the nature of the soil from which it is obtained. The subject of feed, I think, is one well worth the trouble of a little investigation, and I shall be pleased to hear the opinions of others.—**BARNARD P. BARNY, Darlington, near Robertstbridge, Sussex.**

PIGEONS AT NEWCASTLE-UPON-TYNE AND DARLINGTON SHOWS.

A LETTER in your last Number, page 139, signed "A FANCIER," I cannot allow to pass without giving some explanation. I regret exceedingly that there should be any ground for complaint as to the judging of Pigeons at the Newcastle Show, as I had, perhaps, more to do with selecting the Judges than any one else.

When the Newcastle Show was first decided upon, Mr. Hewitt was fixed on as Judge, knowing that this gentleman's decisions almost invariably give satisfaction. He was written to, and accepted the office; but a few days previous to the Show taking place I received a letter from Mr. Hewitt, stating that he thought he could not comfortably get through the number of entries by himself in the time allotted, and suggested some one at least should be secured to take the Pigeons off his hands. I was, consequently, tied for time to obtain a Judge for this department; but happening to place my hands upon the Darlington catalogue for last year, I noticed Mr. Botcherby acted as Judge there, so I concluded at once that if Mr. Botcherby was competent to judge at an important Show like that at Darlington, I could not be wrong in asking that gentleman to do so here, and I wrote to him immediately, and procured his sanction, consequently the matter was decided. Previous to this I had not heard a single word about the dissatisfaction his judging had given at Darlington, or you may depend upon it I should have avoided the services of Mr. Botcherby. However, I believe Mr. Botcherby to be highly respectable and honest as a judge, but as to his competency for such a task I confess I know but little.

You must also permit me to rectify an error in the letter referred to. I did not reverse a single card that Mr. Botcherby had placed upon the Pigeon classes; but unfortunately some of Mr. Yardley's birds had remained in the basket until after the awards were made: regretting this as I did, I proposed to Mr. Yardley that if the amount of a first prize would satisfy him for the oversight in not putting the birds in their proper place in time, I should be most happy to pay over the extra amount, which Mr. Yardley accepted.—**J. SNOETHOUSE.**

On looking over your last Number, I find a letter from "A FANCIER" criticising the judging of the Pigeons at the Newcastle and Darlington Shows. His strictures upon the former may be all very right, I am not in a position to give an opinion; but some of his remarks upon the latter are quite beside the mark.

In the first place, he gives his readers to understand that Mr. Botcherby was the only judge at Darlington; but on referring to the catalogue, which I happen to have, I find, under the Pigeon Judges, the names J. W. Botcherby, Esq., F. Bellamy, Esq. "FANCIER" altogether ignores the fact of the latter gentleman's having officiated. Now, I know nothing whatever about Mr. Botcherby's capabilities; but I think every fancier will admit at once that Mr. Bellamy is a thoroughly competent judge, and, taking his presence at Darlington into consideration, I cannot think the awards were so outrageously bad as "A FANCIER" would have us believe.

Again: he says, "The silver cup for the best pen in the Show was awarded to an old Dun cock, a draft from the loft of one of our well-known exhibitors; while one of the best Carriers in the kingdom and in her prime, a black hen belonging to Mr. Else, of London, was shown." Now, I am prepared to prove that the Dun cock spoken of was, when exhibited at Darlington, under three years old, and, to use "A FANCIER's" own words, in his prime, and one of the best Carriers in the kingdom.

With these misstatements before me I cannot help thinking that if inquired into some other of "A FANCIER's" "facts incontrovertible" might prove fictions. To my thinking there is a feeling of soreness throughout his letter which reminds one very forcibly of "sour grapes."—**J. I. D.**

"A DEVONSHIRE BEE-KEEPER" VERSUS THE "TIMES" BEE-MASTER.

FOR the credit of British journalism, I regret to state that my second letter in reply to the acrimonious tirade of the "Bee-keeper" in the employ of the *Times*, who turns out to be Dr. Cumming, the well-known controversialist, has been refused insertion in that paper, although another violent attack on me from the learned (?) doctor's pen appeared in the *Times* of the 12th inst. Of this precious production I need only remark that it is worthy of its predecessor, and that it fulfils a prediction made by the *Aberdeen Free Press* of the 5th inst.—viz., that the doctor was using his influence with the view of puffing a book which he intends publishing. Unlike Dr. Cumming's own interpretations of prophecy, this prediction has been literally fulfilled by the astonishing announcement that a man, who cannot write a letter on the subject of bees without blundering in every paragraph, is not only about to "put together" a book upon them, but has actually found a publisher willing to run the risk of printing it! Although the publishers of cheap literature have been notoriously unfortunate in their selection of apian writers, and the compilations of Messrs. Richardson and Wood must therefore be deemed formidable competitors in the race for pre-eminence in ill, Messrs. Low may safely be congratulated on having secured the copyright of what will in all probability turn out to be the most inaccurate bee-book ever manufactured.—**A DEVONSHIRE BEE-KEEPER.**

ILL-SUCCESS IN BEE-KEEPING.

THE letters in the *Times* about bees have somewhat revived my interest in my own, which for several years I have resigned to the care of the gardener, an old-fashioned man, whose only ideas on the subject are tinkling and burning. For the last three years I have had neither swarm nor honey, and my six or eight hives have diminished to two, the reason being, as the gardener insists, that I gave away my luck by giving a swarm to a friend!

Now, I wish to try if I cannot bring back my luck by taking them in hand myself; and I venture to ask if you will be kind enough to tell me what is the simplest and best kind of hive? I had been thinking of obtaining one of the nadir-hives, recommended in the Rev. W. Law's letter in the *Times*; but it occurred to me before I saw by Mr. Woodbury's letter that the principle was contrary to the nature of the bee, and therefore I am hesitating what to do. Can you also kindly advise me what to do under the present state of affairs?

Two or three days ago, on opening the bee-house, which I had not looked into before this year, I found that the bees (in two common straw hives with flat tops), had made an immense quantity of comb outside the hives, thus connecting them together and with the roof of the house, which is now nearly filled with honey, and covered with clusters of bees. The two hives stand on a shelf. The gardener says the only thing to be done, is, later in the season, to burn the bees and take the honey; but I am most anxious to save the life of my poor bees, and should feel very much obliged if you could put me in the way of doing so, and also of going on better for the future.

Some years ago I tried putting a glass over the hole in the centre of the hive; but though the bees on one occasion made a small piece of comb in it, they did not fill it, and I have never succeeded in obtaining honey in that way.—**C. S. B.**

[You cannot do better than use flat-topped straw hives, with a three-inch hole in the top. You require the assistance of a practical apiarian, who, by the aid of a little smoke, would soon cut away the extraneous combs, and compel the bees to retire to their hives. Had you supered your stocks this season, you would doubtless have obtained a large

quantity of honey. Glasses require to be kept warm by an external covering of flannel, or some other non-conducting material; and the absence of this precaution, and the possible want of decoy-comb in the glasses, are the most probable causes of failure.]

BEES FORSAKING A STOCK-HIVE.

EXCEPTING myself, no one in this neighbourhood, so far as I am aware, keeps bees, and the present is only the second season of my doing so, and this must be my apology for asking for information.

In May last year, I bought what was considered, and, I believe, was a good top swarm, which threw off another after I had had it about a month. I kept them through the winter, both being strong and healthy. This season the parent hive threw off two swarms, the first in the end of May, and the second about three weeks later, both of which continue, so far as I can judge, healthy and active. About a month ago I remarked that the occupants of the original hive seemed to become lazy, not showing themselves outside in numbers like those of the five neighbouring hives, and such as I should have expected from their supposed strength. Daily their numbers seemed to diminish, till within a few days past there has been "no appearance," and no sound of life from within. I lifted the hive off the board; and not a little, I confess, to my disappointment and surprise, found that they had fled, leaving about 1½ lb. of wax, but not an atom of honey. Now, will you kindly inform me how this is to be accounted for, and in what way I can prevent similar casualties among my bee stock in future?—E. J. S.

[The bees have, doubtless, vanished from the old stock owing to the absence of a queen, and this may have arisen from various causes after the departure of the last swarm. The remaining bees may have failed to raise a queen. Your stocks may be placed too close together, and the young queen may, therefore, have perished through mistaking her hive on her return from her wedding flight, or she may have been "worried to death" by her own subjects, as related by "A DEVONSHIRE BEE-KEEPER," in page 80. All that you can do in order to render such a misfortune less likely in future, is to take care that your hives are a sufficient distance apart.]

DEPRIVING.

I HAVE adopted the Woodbury bar-hive and super as recommended in the manual of "Bee-keeping for the Many." I find that the stock-hive contains from 45 to 50 lbs. of honey, and the super is filled with comb, but there is scarcely any honey. The space also between the bars of the stock-box and adapting-board is filled with comb and honey so full that it appears one solid mass. Now, I am anxious to take about 25 lbs. of honey from the super and stock-box, so as to leave 25 lbs. in the stock-box to supply the bees during winter. What plan would you recommend me to adopt?

I should remark that I had to remove the adapting-board upon three or four occasions when I first put on the super as the bees would not take to the super at first, but would work between the top bars of the stock-box and the adapting-board. My adapting-board has openings near the sides about a quarter of an inch in width.

As I have discovered a sure system of ventilation, I think of having hives made of glass sides covered with board shutters lined with flannel, so as to be able to expose all four sides to view at once. In order to take the honey from my present box, do you think I should succeed if I were to remove the cover of the super and place on it a hive containing 25 lbs. of honey, and to drive the bees into it by tapping at the sides of the stock-box and super? Perhaps, however, a quarter of an inch would not be sufficient space for the queen and larger bees to ascend. In that case I should have to enlarge the opening in one part. I have an empty box with frame-bars.—J. H. L.

[If the bees can spare them there is no objection to your appropriating the two side combs only from the side box. Their places will be best left vacant during winter, and in spring they may be advantageously filled up by a couple of

empty combs from the super. The combs remaining in the latter should be taken care of, as they will give the bees an excellent start in filling the super next spring. Bees generally fill the vacant space between the bars and crown-board with comb which may be scraped off when convenient, but you need not have removed the crown-board purposely.

You had better allow your bees to remain in their present domicile, and stock your new hive with a swarm in the spring.]

AUTUMNAL UNIONS.

I HAVE bees in a common cottage hive, and I wish to take the honey without destroying them. I am told I can fumigate them with the puff ball. I tried doing so but lost my bees. I was afterwards told I could effect my object by using chloroform: this I also tried, but whether the chloroform was good or bad I cannot say. I failed again. Some people think it a good plan to drum the bees; but I should fear to rely on it. If you do not object to kindly advise me what plan you consider best to deprive them, without destroying them at this season of the year, I shall esteem it a very great favour.—J. H.

[Chloroform is destruction to bees, and fumigation we believe little better. The best mode of appropriating the contents of common cottage hives in autumn is to drive the bees and unite them to other stocks. Articles from the pen of "A DEVONSHIRE BEE-KEEPER," describing the best way of performing these operations, appeared in Nos 139 and 144 of our new series.]

REMOVING AND TRANSFERRING BEES.

I WISH to ask one or two questions respecting bees, if you will kindly answer them.

1st. I find I must shift my apiary as follows:—One lot some 20 feet to the right, but exactly in the same line as before, and another lot some 40 feet in front, to shift them by the side of the first lot. Will you kindly inform me whether it is practicable so to do, and the best time?

2nd. I have taken 30 lbs. good from each of my eight hives, on the depriving system. Would you advise me to take any from the stock-box?

3rd. What is your opinion as to transferring bees at this season into an empty hive—any from a straw to a bar-hive?

4th. Which do you prefer, the collateral or storifying system?—JOHN NEWLAND.

[The best plan will be to remove your bees temporarily to a distance of not less than a mile and a half. This may be done at once, and in three weeks' time they may be brought back and arranged in their new positions.

We should say, as a general rule, do not plunder stock-boxes.

Bees with their combs may even now be transferred from straw into frame-hives, but it requires a considerable amount of apian skill to perform this operation successfully.

We prefer the storifying to the collateral system.]

A GOOD BEE-HIVE.

SEVERAL correspondents have written to us inquiring what is the best style of bee-hive, where it can be obtained, and how it is managed. We have been at some pains to collect information on these points; and we shall now give the results of our investigations, in the hope that they may be of service to intending or actual bee-keepers. We present herewith two illustrations of a hive, which, without hazarding the assertion that it is absolutely the best in existence, we have no hesitation in pronouncing a very good one, and, on the whole, the best that has come under our observation. It is manufactured by Mr. P. A. Scott, an ingenious mechanic of Toronto. This hive bears a strong resemblance in its leading features to the Langstroth-hive, but embodies improvements suggested by other eminent apiculturists, as well as some peculiarities of Mr. Scott's own devising. A very fair general idea of its outward appearance and internal arrangements may be gathered

from the accompanying cuts, but a few explanatory remarks may not be wholly useless.



Fig. 1.

The above engraving (fig. 1), shows the hive in its usual closed state, and it will be seen that it has an independent stand, and is well contrived for protection against the weather. There is no danger of its being blown over, and it

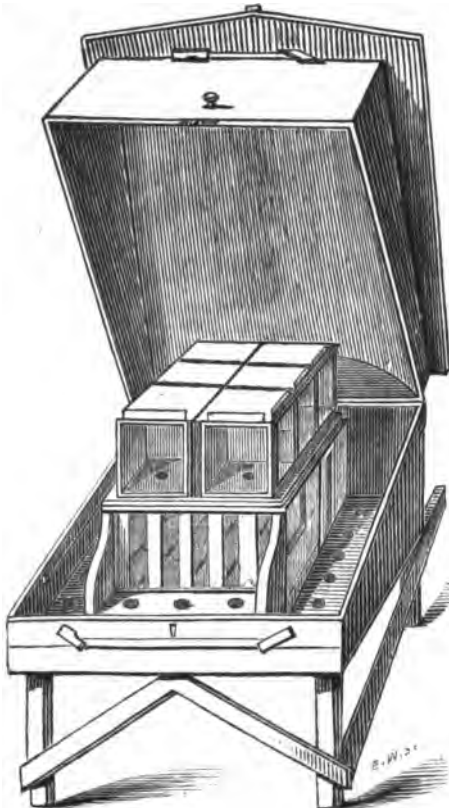


Fig. 2.

is furnished with lock and key so as to be safe from unnecessary disturbance. It is made to slant towards the entrance, to facilitate the carrying out of dead bees and other useless

substances. Traps for the bee-moth are made in the moveable blocks at the entrance of the hive. A strip of cloth is tacked across the front, so that the bees when they come home heavy and clumsy with their load of honey may not be bruised and injured by striking against a hard board. Ventilation is provided for on the outside of the hive, and it can be regulated without disturbing the occupants. The ventilators are covered with wire cloth, so as to exclude the enemies of the bees. Dampness is carefully guarded against. The exterior of the hive is painted to preserve it from the weather and give it a neat appearance.

The second cut (fig. 2), exhibits the interior of the hive, which is so constructed as to give the bee-keeper entire control over the combs without injury to a single bee. It may be well to observe that the accompanying illustrations present two different sizes of the hive. Three sizes are made—those represented are the medium and largest sizes. The closed hive, as will be seen by the two sets of hinges, is double-storied. The open hive is one-storied. The lower part of the open hive, which may be considered the main portion of this bee-dwelling, is fitted up with moveable comb-frames, while above there is a set of boxes into which the bees can be admitted at pleasure. The moveable-comb principle may now be considered as fully established. All intelligent and experienced bee-keepers regard it as a most valuable addition to the facilities for managing bees. The frames shown in the cut are so made as to guide the honeycomb in a straight line, and any one of them can be taken out and examined without disturbing the rest. They save labour to the bees, and give the bee-keeper full management of the internal activities of his insect family. The comb may be removed from the frames without cutting, and, if desired, the honey can be taken from the comb, and it returned to the hive to be refilled, or good pieces of worker comb may be put in the spare honey-boxes. The condition of the bees can be inspected at all times with perfect ease, the chambers being enclosed and partitioned with glass. This hive is adapted either for a strong or a weak colony. It can be either swarming or non-swarming, as may be preferred. Two swarms can be united in one hive, if it be desired. Artificial swarming can be readily accomplished in them, and the uncertainty of natural swarming may be entirely obviated.—(Canada Farmer.)

OUR LETTER BOX.

NANKIN BANTAMS (*Constant Reader*).—We cannot tell you where to obtain the Bantams. We have seen none for a long time.

SULTAN FOWLS (*Ignoramus*).—We fear we cannot help you. Miss Watts was the importer of these beautiful birds. We fear the breed has not been kept pure.

DUCKWING GAME FOWLS (*Amateur*).—We do not know the Red-breasted Duckwinged Game, nor have we heard of any. We are not more enlightened with regard to the machine you speak of, we have neither seen nor heard of it.

PIGEON UNABLE TO STAND (*W. K.*).—Your White Dragon has probably ruptured a small blood vessel on the brain; rest and quiet will be best for the bird; and time may effect a cure by absorption of the suffused blood.

HIVES (*F. S., Derby*).—Flat-topped straw-hives, with a three-inch hole in the top, are as good as any for ordinary bee-keeping and working purposes. The Woodbury frame-hive is the best for scientific and experimental purposes.

GOLD FISH (*F. G. S.*).—If there are plants growing in your basin for the gold fish to spawn on, and the water is not too cold from the fountain, the fry will be hatched readily enough; the only fear will be of the old ones eating them up. Perhaps the old fish after the spawn is deposited might be removed.

GOLDFINCH WITH ELONGATED BEAK (*E. G. H.*).—You can pare the beak of your Goldfinch with a penknife, or pair of sharp scissors, back to its proper length, without any injury to the bird.

LONDON MARKETS.—August 22.

POULTRY.

We should have nothing to note were it not for the advent of Grouse. This year seems desirous to make amends for past shortcomings. There have seldom been so many in the market the first week as this year. The quality is excellent.

	s.	d.	s.	d.		s.	d.	s.	d.
Fowls	2	0	2	6	Ducklings	2	0	2	6
Smaller do.	1	9	2	0	Grouse	1	9	2	6
Chickens	1	3	1	6	Rabbits	1	4	1	5
Goatlings	0	0	6	0	Wild do.	0	8	0	3
Geese	4	6	5	0	Pigeons	0	8	0	3

WEEKLY CALENDAR.

Day of Month.	Day of Week.	AUG. 30—SEPT. 5, 1864.	Average Temperature near London.			Rain in last 37 years.	Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock before Sun.	Day of Year.
			Day.	Night.	Mean.	Days.	m. h.	m. h.	m. h.	m. h.		m. s.	
30	Tu	Agrimony flowers.	71.9	46.1	60.0	8	11 45	50 46	27 3	38 5	28	0 20	243
31	W	Red Bryony ripe.	71.2	47.5	59.3	15	13 5	47 6	30 4	0 6	29	0 2	244
1	Th	Partridge shooting begins.	70.5	47.4	58.9	19	15 5	45 6	32 5	22 6	30	0 17	245
2	F	Berberries ripe.	70.6	47.5	59.1	15	16 5	43 6	37 6	43 6	1	0 36	246
3	S	Meadow Saffron flowers.	70.3	47.5	58.9	15	18 5	41 6	41 7	4 7	2	0 55	247
4	Sun	15 SUNDAY AFTER TRINITY.	70.3	46.5	58.4	15	19 5	39 6	46 8	27 7	3	1 14	248
5	M	Hawthorn berries ripe.	70.0	47.4	58.7	15	21 5	36 6	50 9	53 7	4	1 34	249

From observations taken near London during the last thirty-seven years, the average day temperature of the week is 70.7°, and its night temperature 47.4°. The greatest heat was 85° on the 1st, 1843; and the lowest cold, 33°, on the 3rd, 1862. The greatest fall of rain was 1.50 inch.

QUALIFICATIONS OF THE SCARLET GERANIUM FOR BEDDING.



WHEN in bygone years such florists' flowers as Tulips, Auriculas, Ranunculuses, Polyanthes, and Pinks held a higher place in public estimation than they now do, many villages of no great pretensions had their periodical shows, which were looked forward to with considerable interest by aspiring exhibitors. Each class of plants had then to be judged by a code of rules which, unlike the laws of the Medes and Persians, were altered if found defective. Whatever opposition may have been offered to these rules at times, and whatever changes were made, it is certain that the flowers which stood high in public favour in the beginning of the present century were judged according to the closeness with which they approximated to a certain standard of perfection which was supposed to be equitable. The rules which then existed are far from being obsolete at the present day, although, instead of a universal adherence to them, a sort of anarchy has sprung up, every man making laws for himself, so that even in such important flowers as the Azalea, Rhododendron, Scarlet Geranium, and many others, the points of excellence are far from being universally defined. Flowers have never been so popular as they are at the present day, but there is in many instances a lack of knowledge of the properties which fit a plant or flower for a certain purpose, and it would be a most desirable result if florists would determine on some standard that is not absolutely unattainable, and judge the respective merits of each claimant for distinction by the near or distant approach it makes to that standard. I therefore invite everyone to put forth his own views as to what constitutes perfection in one of the most useful as well as most popular of all our bedding plants—the Geranium of the Zonale section.

In calling attention to this subject I confess having some misgivings as to a universal acknowledgment of any particular set of rules being attained, but, at the same time, much useful information may be obtained, and matters which individual growers might set down as established rules might be modified or set aside entirely by the majority; so much, indeed, depends on the character of the season, the soil, and other features, that the decided opinion of one individual might in a large assembly of growers receive very few or perhaps no backers. Take, for instance, the present season up to the 20th of August; in this district it has been a very dry one since the Geranium started into growth, and as one of the effects of the dry weather we see a greater abundance of bloom on Geraniums than we were wont to do, and a diminished growth. Sturdy, rank-growing varieties have

descended into the condition of medium growth, those of dwarf habit have been still more diminutive, and the whole have been alike loaded with bloom to an extent not generally met with. Judging them by the present season only we are struck with the idea that the strong and vigorous kinds are the best; but this is solely owing to the absence of moisture in the air and ground, and the consequent tendency of the plant to expend its energies in the formation of flowers and seed. If dry weather were to continue, and the plants were not supplied with water artificially, there would be every likelihood of their flowering themselves out, as the saying is—a circumstance of rare occurrence with the Geranium, though by no means so with many other plants. Indeed, I think there are examples already amongst our bedding Geraniums indicating a cessation of blooming at no distant date, unless rain or artificial means push them into fresh growth; but even in the latter case the bloom will be late and far from abundant.

Before entering on the qualities necessary to constitute a first-class bedding Geranium, I must allow that my experience of some kinds this year is diametrically opposite to what it was last season, as some varieties I had then almost made up my mind to discard, have this season been the best I had, and others the reverse: therefore we ought not too hastily to condemn anything without a fair trial. The present year having proved that strong growers are the best, are we justified in depending on them entirely for another season? To this I unhesitatingly answer, No; for until we have the character of the forthcoming season placed before us we must continue to provide against the contingencies which each succeeding year brings with it. If next year be damp, and we have only coarse strong-growing Geraniums to depend on, we shall have little bloom, and the beds will be overgrown with rank foliage.

Let us now see what really constitutes a good bedding Geranium, leaving those extremes of wet or dry seasons out of the question, as they may be discussed hereafter. Although I by no means assert that the standard I lay down is the one that may be generally approved of, still it may serve as a basis on which to found a more complete and perfect system; premising, therefore, that the plant is wanted for bedding purposes, and confining my remarks to the Scarlet-flowered section, which is, perhaps, the most extensively-planted of any, I would define the desirable properties thus:—

Habit—Strong but not coarse; spreading rather than upright; joints short.

Foliage.—As deep and shining a green as can be had, with the least possible horseshoe marking upon it; leaf-stalk short but strong, the leaf itself somewhat convex, and its edges smooth.

Flower.—Truss medium sized (not but that large trusses are better than small, but they are also fewer in number), each individual bloom to conform to the standard that is generally laid down for a good flower. The truss ought to be compact but not confined, and the bloom the same in colour to the centre, a white eye being objectionable. The

less the plant is given to perfecting seed the better; and kinds having seed-vessels pointing downwards instead of upwards are the least unsightly. The flower-stem to point upwards generally, although this qualification on the outside plants is rather a disadvantage. The stem may either be green or white, but I cannot see any advantage in the latter colour.

By the above rough outline it will be seen that I have preferred the plain Green-leaved class to those marked with the horseshoe. The latter I have no objection to admit as pot plants for more close inspection; but at the distance most flower-beds are viewed at, the black marking is rather a defect than otherwise. For a like reason I have condemned the white eye, and have preferred the spreading in habit to the upright grower. For particular purposes, perhaps, a variety of upright growth might be preferable; but for general use one that spreads laterally, with at the same time sufficient sturdiness to support itself, is better. A very long flower-stem is no particular advantage so far as I can perceive, but the flower ought to be well elevated above the foliage, say 3 inches or so above the highest part of any leaf; and as the stalk must descend some distance, there will be plenty for all nosegays or flower-stands. I might also have added that flowers that will withstand the greatest amount of sun, wind, and rain are preferable to those less serviceable; and if they drop off in decaying they are better than if adhering to the flower-stalk, as attention to picking off the blooms is not possible everywhere, and in such cases the varieties which do for themselves are better than those that have to be waited upon.

The above remarks having extended to a greater length than I intended, I will at a future time enter into the merits of the Variegated class, which, I may observe, is every day becoming more and more numerous. In the meantime I invite opinions on the merits of the Scarlet class; and later in the season I will report on the kinds which we grow here, for it would be premature to do so in the middle of the season. I may, however, confess that one or two of my greatest favourites last year have signally failed this season, and I have no doubt it has been the same elsewhere. Other changes, too, may take place ere the flowering season of 1864 be at an end. As the Geranium is unquestionably at the present moment our most popular bedding plant, anything bearing on its merits as well as on its management must be acceptable to the general reader; and as my worthy fellow-labourers in this Journal have at various times set forth its culture, it remains only for us to determine what constitutes the right sort of plant to cultivate. I hope, in conclusion, that everyone opposed to the views above stated will at once put his own on record in the pages of THE JOURNAL OF HORTICULTURE.

J. ROBSON.

BEDDING GERANIUMS.

(Continued from page 86.)

ALTHOUGH it is advisable to put in the stock of bedding Geraniums in August, propagation is sometimes deferred till September, which is not nearly so good a time, as the cuttings are then more gross and watery, and on that account more liable to damp off; the sun's power is also less at that season, and the cuttings have to be struck under glass, a little heat being necessary to cause some of the variegated sorts to root freely. These late-struck plants, too, are later in making a show in the following season, and with Golden Chain and other slow-growing and rather delicate kinds, the practice does not accomplish the object aimed at—viz., providing strong plants to decorate the flower garden in the following season. Where the propagation of Geraniums has been delayed until the last week in August or beginning of September, cuttings should be taken at once, and inserted singly in small pots in a compost of light turfy loam with a liberal admixture of river sand. Silver sand is preferable for some of the variegated kinds, for they do not grow so freely as the Scarlets. These cuttings, if placed in a vinery, or any house with not too dry an atmosphere, if shaded a little and the soil in the pots kept sufficiently moist, but on no consideration wet, will root freely in three weeks or a month, and may then be removed to a light airy situation in the greenhouse, where they will only require water to prevent

their flagging and losing their leaves. All yellow and decayed leaves should be removed as they present themselves.

Another method is to insert four cuttings in a 32-sized pot, six in a 24, or eight in an 18-sized pot, placing them round the inside, and if they are kept in any house where there is a little heat and a not-over-plentiful circulation of air, they will become well rooted before the dull dark days of winter set in. The pots are then placed near the glass in any light airy structure from which frost is excluded. A readier mode, and one that takes up much less room, is to employ propagating-pans 1 foot 6 inches long, 1 foot wide, and 4 inches deep, outside measure, inserting the cuttings in these as closely together as possible without literally crowding them one upon the other. One of these pans will hold fifty cuttings without crowding, and the pan itself takes up less room than is necessary to hold a dozen cuttings in pots. Next in utility to these pans are wooden boxes, and these are of two sorts:—1st, long narrow boxes made of three-quarter-inch deals, 3 feet long, 6 inches wide, and 4 inches deep, outside measure; 2nd, wider and shorter boxes each 1 foot 6 inches long, 1 foot wide, and 4 inches deep, both kinds having six holes bored in the bottom to allow the water to escape. The former description of boxes will hold four rows of cuttings, the two outer rows being close to the sides of the boxes without actually touching them, and the two inside rows 2 inches apart, and the cuttings 2 inches from each other in the rows. The narrow boxes will, therefore, hold seventy-two cuttings, whilst the wide boxes contain about eighty. These boxes may be made neatly, and if painted green they have a tidy appearance. They are prepared for the cuttings as follows:—A few crocks are placed at the bottom to a depth of from half to three-fourths of an inch, and on these is placed an equal thickness of the rougher parts of the compost, which should consist of turfy light loam two-thirds, and river sand one-third, sifted through a half-inch riddle. With this compost the boxes are to be filled quite level, and in it the cuttings are inserted at the above distances and gently watered. They are then placed in a greenhouse or any other house, heated or not, only they will be a week or ten days later in rooting in a cold house, and will not do so with the same degree of certainty as in a structure with a higher temperature. No more water must be given than is sufficient to keep the soil in a nice healthfully moist condition. A slight bedewing of the foliage is beneficial, and preferable to a very wet state of the soil, which is hurtful to the stems of Geraniums at any time, but more so when they are inserted in the soil to strike root.

By the beginning or middle of October the boxes or pots should be placed on shelves about a foot from the glass, so as to insure a stiff, hardy growth. During the winter the plants will not require watering oftener than once or twice a week, nor, indeed, so frequently in dull, cloudy weather, no more being given than is sufficient to keep the soil in a healthy state. They should, however, be examined occasionally, all yellow and decayed leaves removed, and the surface of the soil between the plants stirred with a piece of wood. These are small matters, but attention to them is very conducive to the health and vigour of the plants. Air must also be given on all favourable occasions, admitting it early, with the thermometer at 45°, and closing early, so as to shut in as much sun heat as possible, which will lessen the necessity for lighting a fire. Fire should only be employed to prevent the thermometer falling below 40°; though it may sink to 35°, yet a minimum temperature of 40° is low enough to keep Geraniums in good health. The temperature should range from 40° to 45° with fire heat, whilst a rise of 10° or 15°, with sun and abundance of air, is very conducive to health. A gentle fire now and then to dry up damp in dull, moist, or rainy weather, accompanied by ventilation, is also essential to success.

These remarks apply equally to cuttings that may be taken from the last week in August until the last week in September, by which time the last batch of cuttings ought to have been secured. Even that is but a haphazard system of raising bedding Geraniums, and gives plants that are late in coming into bloom in the following season. Besides, some of the weaker and dwarfer kinds, as the Nosegay, and all the variegated sorts which it is desirable

to turn out in a forward state, do not do well at the time of striking, and in the following season in beds, unless they are put in as cuttings by the middle of September at the latest, and this is fully a fortnight later than they ought to be. Stella and Baron Ricasoli, two of the best of the Nosegays for bedding purposes, I like struck in August, and also the variegated kinds, not in clusters in pots, pans, or boxes, but singly in 60-sized pots in the first instance, transferring them to 48's before October; in these they are wintered, potted into 32's in the first week in March, and where there is frame room let them have another shift into 24's in the middle of April, by which time they will be in fine condition, and seldom "look behind them" again. The stronger and hardier sorts we need not be so particular about, for they will strike if inserted any time in September, and tolerably well if put in before frosts cut them off in October. In fact, the time of striking Geranium cuttings depends greatly on the period at which the plants are wanted to bloom in the following season. If an early bloom is desired—say in July and August, the variegated and smaller growers should be inserted in August, about the middle of the month, and the stronger-growing Scarlets about a fortnight afterwards. Then for a late bloom the variegated and smaller sorts of Scarlets will do inserted any time before the middle of September, and the stronger kinds about a fortnight or three weeks later. Such furnish plants for blooming effectively in August and September. I have occasionally made up in the beginning of September a dung hotbed, about 2 feet high, consisting of well-fermented dung, covered it with a two-light frame, and in a week or ten days put on a few inches of pit sand, and placed on this the pots of cuttings. With a mild heat of 75°, and a slight shading from hot sun, I had cuttings struck in ten days or a fortnight, and quite as forward as if they had been struck in August without heat. This was done chiefly because the old plants did not furnish a supply of cuttings sufficiently early for cool propagation in August, and also because taking a large number of cuttings would have detracted from the effect at that time.

In whatever manner the stock of Geraniums may have been struck in the autumn, they should be potted by the last week in February or beginning of March from the pots, pans, or boxes in which they were kept through the winter, selecting for the purpose the size usually known as 32's, and employing a compost of turfy loam two-thirds and leaf mould one-third, with a liberal admixture of sharp sand. This compost will grow almost any kind of Geranium well. By placing a few crocks at the bottom of the pot, and some of the rougher parts of the compost upon them, the necessity of employing a larger amount of crocks will be obviated, and equally efficient drainage will be secured. The plants should be taken up with a small ball if practicable, and potted rather firmly. After potting give a gentle watering, and place in a vinery or any house where forcing is just commenced. The slight increase of heat and the moist atmosphere will cause the plants to become quickly established, and they will grow rapidly. Those not having vineries and whole ranges of pits need not pot-off the plants from the cutting-pots so early, but may defer it until the beginning of April.

The plants being potted, and placed in the beginning of March in an increased heat of 45° or 50° by night, they will be stout plants by the middle or end of April, and bushy if due care has been taken to pinch or cut back any that exhibit signs of tall lanky growth; the shoots thus cut back if made into cuttings will root quickly, and will make nice, though small, plants by bedding-out time. Some cuttings will grow up with a single stem, and attain a tree-like height before they branch, such should be stopped at the fourth leaf above the soil, and this will cause side shoots to be emitted. It is a good practice to stop the shoots of those plants requiring it about a fortnight after potting. By the middle or latter part of April the house, especially if a vinery, will be too warm and too much shaded for Geraniums, and they not only grow too fast, become long-jointed, and drawn up weak, but are liable to receive a check from which they rarely recover before June. This check is consequent on removing them from a shaded, warm, and damp atmosphere to a lighter, cooler, and drier position. Although there is no better place for wintering Geraniums and forwarding them

in the spring than a vinery, the Vines of which are annually started in the beginning of March, yet a worse place could not be found for them after the middle of April. A cooler place is much more suitable, such as cold pits, Peach-houses against walls, or between the pots in orchard-houses. Cold pits or frames, however, are the best places, for it is undesirable to encumber fruit-houses with Geraniums; besides, when houses are used for a variety of purposes the cultivator in his endeavours to suit everything is unable to give proper treatment to anything. With cheap glass a house specially devoted to bedding plants would not be costly, and would to a great extent obviate the necessity of wintering them in vineries and keeping them there until they are almost spoilt.

Having the plants in a flourishing condition in 32-sized pots by the middle of April, place them in any light, airy description of house from which frost is excluded, but no artificial heat given. If it is desirable to increase the size of the plants they may be potted in 24's in ten days or a fortnight after having been removed into the cool-house, pit, or frame. In this situation they will require copious supplies of water, but none should be given until it is needed, yet the plants should not be allowed to droop, or the leaves will be prematurely thrown off. A dry atmosphere is likewise adverse to the healthy development of the foliage. If the plants are in frames or pits the lights should be covered with mats whenever there is a likelihood of frost before morning, and in addition to water at the root, a gentle watering overhead night and morning will do much towards insuring good plants. Abundance of fresh air, indeed full exposure to the sun, is of paramount importance, for, unless the plants are capable of enduring this before planting out, they will cause nothing but disappointment for some time afterwards, in consequence of their yellow appearance, and arrested growth. They should, therefore be exposed to the atmosphere for some time previous to planting out, and be in no wise affected by cold, sun, and dry air. Thus duly inured to light, &c., the plants will require more room by the last week in May, or beginning of June, and should then be planted out in the beds. These should have been dug deeply in autumn, a liberal amount of vegetable matter worked into the soil, and be again forked over a few days before planting.

With regard to planting Geraniums, some think them best plunged in the pots, whilst others say they should be planted out. I have no doubt that according to circumstances the advocates of both systems are right, but it happens that what will answer in one place will not do at another. Where the soil is light, dry, and but moderately rich, the plants are best planted out, for the very nature of the soil acts as a sort of check to over-luxuriance, and they are, therefore, prolific in bloom and foliage; but in rich, moist soils, which have a tendency to stimulate the plants into growth without giving a corresponding amount of bloom, keeping them in pots acts as a check to over-luxuriance, and they grow less, but bloom more profusely, if plunged instead of planted out. Seasons also exert an influence in this way. In wet seasons the plants are best in pots, whilst during a dry season such as the present, we would find them in much the same condition when we took them up in the autumn as when we plunged them in the pots in May and June, unless they were daily watered. It is admitted by all, that close planting is preferable to thin, for whilst plants treated in the latter way afford but a poor and late return, the others are covered with an early and effective bloom.—G. ABBEY.

(To be continued.)

EXPERIENCES OF A COUNTRY PARSON.

THERE is this advantage in writing the name and address at the end of an article—viz., the public can go to the garden and see "if these things are so." Moreover, it is a security against wilful misdirection.

On four following days these distinguished persons came to review things here—namely, Mr. Kelway, jun., nurseryman, of Langport, Somerset; H. Davis, Esq., Warminster; H. C. Sturt, Esq., of Critchill; and J. Hanes Calcraft, Esq., of Rempstone, near Wareham; and the Provost of Eton with Mrs. Farquharson and party. They all said they never

saw such a sight as the Peaches (see page 145), and that they admired the foliage and strength of the trees as much as the Peaches.

About 100 had been gathered, beginning on the 9th of August. The crop left on the trees was 450.—W. F. RADCLIFFE, *Tarrent Rushdon*.

At the Blandford Horticultural Show, August 25th, the first prize for Peaches was awarded to the Rev. W. F. Radcliffe; also first prize for Roses, 24 trebles grown on the Manetti stock. Both classes were "open."

OUR METROPOLITAN FLOWER SHOWS.

If I understand the complaints which have been made against the present style of horticultural exhibitions, they are referable to two points—the sameness of their character, and the deficiency of their arrangement. These complaints have been mainly made in connection with the shows of the Royal Horticultural Society at Kensington, and have received some considerable force from the reports that have been brought home by those who visited Brussels during the present year.

We have heard glowing descriptions of the beautiful arrangements, what a fairy scene it seemed to be, and how delightful it would be to have our flower shows arranged in somewhat of the same manner; but I think it is well to entirely dissipate such notions.

We are often told, also, that "they manage these things better in France;" and although I did not see the Brussels Exposition, yet I have seen that which is organised by the Société Impériale d'Horticulture at Paris, and very pretty indeed it was with its parterre and its beds; but as an exhibition of the skill and science of gardeners—bah! Why, there was not a dish of fruit there that Mr. Solomon would have cared to have had in his shop in Covent Garden; and as to the flowers, they exhibited neither skill nor taste. A number of collections there were, but then the plants were starvelings—Orchids, Cactus, &c., in moveable small pots; so that I feel sure none of those who really value a flower show as we have them now would turn aside to look at these productions.

As to Brussels, there are a few things that our reformers must bear in mind. In the first place the whole affair is a government matter from beginning to end. Expense is not considered. The productions of growers in any part of the world are delivered in Brussels and sent back to their destination free of expense. The trouble of unpacking and the expense of attending on the plants may even be dispensed with; and owing to this, several of our large growers contributed to the success of the exhibition.

In the second place, this Belgian exhibition takes place only triennially; for that, persons may indeed give themselves up to the extra trouble and bother that is occasioned by it; but these same persons would be very unwilling to do so nine times instead of once.

Thirdly, The show is open for a week or ten days. One whole day is allowed for the Judges to go through the various productions, and these Judges are very numerous—a very different state of things to that which prevails here.

In none of these points do I see that it is possible to effect any change amongst us. It is certain that the Chancellor of the Exchequer will not put down to secret service, or any other additional item in the estimates, the cost of providing flower shows for the London folks in the season, and no society will guarantee exhibitors the cost of the carriage of their plants. There is no probability of any society being contented with triennial exhibitions, nor, indeed, would it suit the requirements of those who attend the shows. And the experience of this present season evidences that it is out of the question to hope to prolong our great exhibitions for more than one day; for when the expense of bringing up these collections to the place of exhibition is considered, and also the number of assistants who are required to attend on the plants, the cost of another twenty-four hours in London to those who come from a distance, especially in the case of amateurs, would greatly deter people from coming forward in any future improvement that may be made. I think, therefore, that it would be well for people to keep

out of their minds any idea of taking the foreign exhibitions as models or guides.

Can nothing, then, be done? Let us see. The points are whether any better arrangement of the plants can be made, and whether the sameness of the exhibitions can be remedied. *Seniores priores*. I will take, therefore, the Royal Horticultural Society first; and I daresay I shall write a very unpalatable thing, but which I believe many besides myself think—that there can never be a beautiful exhibition at South Kensington; and for this simple reason, that there is no place to hold it in.

I understand, whether rightly or not, that Mr. Henry Cole, who seems to be the *Deus loci*, now says that no tent shall be used in the gardens, as it is unsightly, and that hence the fine "mast tent," as Mr. Murray delighteth to have it, was erected outside; and I ask, Where, then, can an exhibition be arranged? "In the arcades," will be the reply of the "great Government-boilers" men. Who is there that does not see at once that if this be indeed the only answer to be given the case is hopeless? The light in those arcades is all side light, and any artist knows perfectly well that that is fatal to the good effect of colour, whether in pictorial or natural objects. Then, again, the arcades are so narrow that it is impossible to place plants advantageously; while the asphalt flooring is so conducive to the generation of dust, that in a very short time the crinolines sweep up and disseminate a steaming cloud of it, while draughts are unceasingly careering up and down, to the imminent peril of throats and lungs, and to the certain injury of plants.

Prizes were offered this year for the best arrangement of plants for a greenhouse, and they were placed at the end of one of the arcades, and I think Mr. Veitch could tell a tale of the state of his plants from the draught that they caught from the staircase.

No one can disparage the plants that are brought to South Kensington, there are generally enough of them to make up two or three shows; but, at the same time, I have never seen that either in the conservatory or in the arcades they have had justice done to them; and whatever success has attended the exhibitions has been due to the plants and not to the arrangement.

The Royal Botanic Society and the Alexandra Park Company hold their shows under tents; and there can be no question that this is after all the only way in which flowers can be seen to advantage. Of course you are dependant on weather, and so you are for everything of a similar character in this country; but the Botanic Society has tried it for years, and has found in the long run that their exhibitions have paid and paid well. I believe the unanimous testimony of those who frequent the metropolitan flower shows is that the Botanic holds the foremost place for beauty—the undulating character of the ground, the green banks (showing up the colour so well), the softened light through the canvass, all conduce to make it admirable. It is not perfect, and when I come to speak of improvements I may say where I think these may be made. The plan, too, of separating the cut flowers in a long and narrow tent, where they can be displayed singly, is another excellent arrangement.

There remains, then, the Crystal Palace, but this is *sui generis*. The arrangement there is of the simplest character; but the beauty of the place itself, the noble expanse of light, softened by the canvass stretched over it, give a charm to it which to some extent relieves its formality, while in no place are the facilities for seeing the productions so great, owing to the width of the transept and the ease with which numbers of persons can promenade at the same time.

I have thus endeavoured to give my impressions of the present state of the London exhibitions, the more necessary in that I find many wild notions propagated about them. Thus, with all due deference to Mrs. Ellis, her islands of beauty for which she pleads are impracticable, at any rate at Kensington, and the same may be said of Sir Joseph Paxton's recommendation about the fortnightly meetings, at least beyond what the Floral Committee now has. He forgets that when those Regent Street meetings used to be held horticulture was in a very different position, and that any one coming to London now can see at Messrs. Veitch's, Lows', Williams's, the Hendersons', or any of the great London nurseries, a much better collection of these plants

which may be in season than it would be possible to collect together in London.

I have dwelt somewhat at length on this point, because I believe that to attempt changes which are impracticable is to miss the object altogether; and the calling together of these various committees, and asking the opinion of the most experienced growers, while at the same time the determination has been come to that no change shall be made in the most important point—viz., where the exhibition is to be held, is very much like the Prussian dodge of sending an ambassador to a conference, while all the time it has been determined to gobble up the unfortunate provinces that once belonged to Denmark, but are now "nobody's child."—*D., Deal.*

THE ROYAL HORTICULTURAL SOCIETY'S NEW AND RARE PLANT SHOW.

THE subjects exhibited having for the most part been before the Floral Committee, as well as at most of the metropolitan shows, and duly reported on at the time, it will only be necessary to notice a few of the most remarkable.

Mr. Bull, who was the principal exhibitor, sent the female *Aucuba* in fruit—a plant of the green-leaved type. This we believe is the third time the plant has fruited in Europe, Mr. Standish, of Ascot, being the first to show it producing its ornamental coral red berries. Mr. Bull also exhibited the male plant hitherto so scarce, *Aucuba himalaica*, and several varieties of *Eurya* and *Euonymus* which have been noticed before. *Saccolabium Dayi* in his collection, with mauve and white flowers, appeared to be a desirable acquisition; and *Gesnera Radiancy*, with rich velvety crimson and green-mottled leaves, was very showy. *Vallota eximia*, having bright light scarlet flowers with a light centre and conspicuous yellow anthers, attracted considerable attention on account of the brilliancy of its colours.

Mr. Linden, of Brussels, sent a few plants, of which the most remarkable was *Rogiera gratissima* with leaves and flowers somewhat resembling those of the *Laurustinus*, the buds are pink and the flowers of the same colour but paler. Being very free flowering it promises to be a great acquisition. Of the others the most remarkable were *Maranta picturata* with olive green leaves, distinctly marked with white for some distance on each side of the midrib, and with a pencilled band of the same hue at some distance within the margin; *Cyanophyllum cinnamomeum* with cinnamon-coloured stalks; and *Doryopteris Alcyonis* with bold dark green fronds.

From Messrs. Jackman & Son, of Woking, came several plants of their fine new hybrid *Clematises rubro-violeacea* and *Jackmanni*, together with coloured drawings of the flowers; and we can safely predict, from the richness of the colours, that these beautiful hardy climbers will be extensively grown.

Messrs. A. Henderson & Co. contributed the variegated *Aralia Sieboldi*, *Gardenia florida variegata*, *Oreopanax dactyliferum*, and *Rhynchospermum jasminoides variegatum*, all of which have been previously noticed; also, new *Caladiums*; Messrs. Herbst & Stenger, Richmond, an excellent collection of Japanese plants, the *Vanilla* plant, the *Custard Apple*, and *Iresine Herbstii*, with bronzy dark crimson leaves, having bright midribs, which is likely to prove useful for bedding; and Mr. McArthur, Maida Hill, two nice plants of *Bonapartea juncea filamentosae*. Lastly, Mr. T. Ingram, gardener to Her Majesty, at Windsor, sent *Japan Lilies*, including *L. auratum*, *Bougainvillea glabra*, *Euonymus japonicus aureo-variegatus*, with shining dark green and yellow leaves; and some other plants.

A collection of plants, including some of Mr. Weir's recent introductions from South America, came from Chiswick Garden; the Cotton plant (*Gossypium vitifolium*), presented by Major Trevor Clarke, of Welton Place, Daventry, was also shown in the conservatory, as well as the beautiful *Peristeria elata*, of which the flowers bear so striking a resemblance to a milk white dove.

We consider this Exhibition a step in the right direction, but, as usual now, it is spoilt by the muddling and ill-management.

When exhibitors of plants which have been long in the country, and which can be replaced with comparative ease

in case of accident or injury, will not allow their specimens to remain during a second day's show, how could the possessors of novelties and rarities be expected to expose them to an ungenial atmosphere, not for two but several days? If any such expectation had been formed it was woefully disappointed, for Messrs. Veitch, Lee, Standish, Williams, and others, abstained from putting in an appearance.

As an inducement to exhibitors one-fourth of the receipts on the first day was to be divided amongst the holders of certificates, and another fourth according to the space occupied, but as at no time during the afternoon could there have been more than fifty persons present, and probably not half of them paying for their admission, the certificate-holders cannot be congratulated on their prospects of a money reward.

We have much pleasure in putting it on record that although 152,962 persons, a large proportion of them children, visited the gardens on Friday last, the anniversary of the late Prince Consort's birthday, no damage was done beyond a few sprigs of *Geraniums* being inadvertently broken off. The grass, and especially that on the slopes, suffered considerably, but that, of course, was only what might have been expected with so large a concourse of visitors.

HORTICULTURAL PRIZES, AND FOR WHAT THEY SHOULD BE AWARDED.

IN the Number of the Journal published on the 16th inst. I observe an article written by Sir Joseph Paxton on flower shows, &c., on which subject I should have ventured to send you some remarks a long time back, had I not been diffident, as an amateur, of intruding on the notice of those more learned and practised than myself. I now take the opportunity of following so excellent a leader, and offer my ideas for the consideration of your readers.

Sir Joseph's remarks on the present practice of supplying the market I think must strike every one: nor do I think it in the least surprising that our continental neighbours give us the name of a nation of shopkeepers, looking at the fact that our nobility and gentry are becoming wholesale poultry-terers and greengrocers. On the game question not so much is to be said. It is essentially a wild production, and cannot be supplied but by large estates and domains. Still the "utile" is now-a-days pursued very much to the exclusion of the "dulce;" and although, after one has enjoyed for some days the pleasant society and profuse hospitality of an old friend, and has had his taste for slaughtering helpless creatures fully gratified, he can scarcely expect to take away all the spoil that may have fallen to his unerring gun, still I have heard many confess slight feelings of disappointment, both at the quantity and quality of the share allotted to him by the head keeper, and wish for the good old times back again.

In the matter of garden produce the case is more serious, as it directly interferes with an important branch of industry, in itself subject to so many casualties from the vicissitudes of climate and seasons as to require all the help possible to render it remunerative.

The subject on which I more particularly wish to make some remarks is that of flower shows and their prize awards. Their main object is the encouragement of gardening, and I think that some alterations might be well introduced in furtherance of this end.

First and foremost, I would disqualify any collection of specimen stove and greenhouse plants from competing for a prize after it had once made the run of the season, for there are very few who have had much experience in the metropolitan exhibitions, who cannot predict as soon as the schedules are published who will be the fortunate competitors, and might even say what plants will make their appearance. It seems to me that the prizes in these classes should be more divided, and awarded to the best collections of young plants of not more than two years growth, so as to be *bona fide* the result of the care and knowledge of the party growing them, for as the matter now stands the prize often falls to him who only shows, and not to the one who grows the plants.

The possession of noble specimen plants can only be ar-

rived at after the expenditure of much care and experience for three or four seasons, or by purchase; and it does not seem to be conducive to the encouragement of the young gardener that such plants should be allowed to bear away the reward season after season, to the exclusion of others of less age, not from want of skill on the part of the grower, but simply, as the Americans would say, because the latter were not raised quite soon enough. As the matter now stands, in order to carry out the present utilitarian mode of procedure, in lieu of the employer paying the gardener it ought to be the reverse—the gardener to pay such a per-centage on the amount of his yearly prizes in the ratio of the number of valuable collections placed under his care.

I have a nice little collection of Camellias and choice Rhododendrons, but if an early spring exhibition were started I could not venture to send my plants, when I know that my neighbour, who purchased his collection at the sale of Messrs. Chandler's stock, intends exhibiting his magnificent specimens; and yet all my plants have been grown under my own personal superintendence, whilst the Camellia fancy was never developed in my friend until after he had admired my little plants.

In the second place, I think that it would be a valuable means of encouragement to appoint judges to visit the respective establishments of those desirous of competing, and that prizes should be given to those who could show the neatest and best furnished places, taking into consideration the means and appliances at command. This would, I think, be a far better test of the real talent and skill of a gardener, for I have more than once heard a complaint that the preparations for exhibition take up so much time that other branches are neglected.—C. M. MAJOR, *Cromwell House, Croydon.*

ORCHARD-HOUSE EXPERIENCE—ESPERIONE VINE.

LIKE many others of your readers I have for some years past found much pleasure, but, I regret to say, little profit in the shape of abundant crops of fruit from the culture of pot trees in an orchard-house. I have failed to obtain anything like fair crops; but I feel quite sure that it is to be done, if one only sets properly to work about it.

Like your correspondent "A. B.," I visited early in July the nurseries of Mr. Rivers, and, like him, was aghast to see the magnificent crop of Apricots in pots, especially as I last year saw very light crops at Mr. Pearson's, and heard from our mutual friend Mr. Brown, of Lenton, that, though he did so well with Peaches and Nectarines, he could not succeed with Apricots. My visit to Sawbridgeworth convinces me that orchard-house trees in pots have in almost every instance been too sparingly supplied with water and rich top-dressing. I have been using wool-dust (the sweepings of a woollen mill), saturated with sewage, and I find in the course of a month that the top-dressing is completely netted with the root-fibres.

I cannot agree with Mr. Bréhaud that Pêche Abec is a bad cropper. I obtain a good crop, but the flavour is not so good as any others I have. Early York I have had this year superb in size and flavour, but a light crop. Early Grosse Mignonne has borne a very good crop; it is of good flavour, and a most handsome Peach. Salway does not seem to do well. The tree makes very vigorous wood, but the fruit does not swell off as it should. Walburton Admirable has dropped most of its fruit, and did so last year, though apparently in vigorous health. Of Early Newington Nectarine I have had some magnificent fruit. Violette Hâtive Nectarine is bearing a very large crop, not yet ripe, but coming on day by day, and looking most tempting. We have a Peach in this neighbourhood which I cannot find in any of the fruit catalogues by name—Cor's Seedling, a very early, delicious Peach, and an enormous cropper. I hope to send you some next year for examination.

Will some of your correspondents be good enough to give their experience of Esperione Vine as a stock for grafting on or inarching? In a cool vinery I have a Vine of it that has been planted about eighteen years; it carries this year seventy bunches averaging 2 lbs. each, which are now colouring. On some of the laterals at the ends of the rods

there is now a second crop of bunches, which are setting. Last year it was the same, and the second crop (only a few bunches), ripened thoroughly without fire heat. Is not this unusual?

The vigour of this Vine is extraordinary, and I have great difficulty in restraining it. I purpose next year to introduce grafts of a better sort (Muscat Hamburgh), shall I do right?—M. B., *North Devon.*

[The caterpillar found at work on the unripe Peach in the orchard-house was the larva of *Mamestra persicaria*, and out of place accidentally, the fruit not being its proper food.]

LIVERPOOL BOTANIC GARDENS.

IN "Doings of the Last Week," I lately alluded to the great beauty of the Liverpool Botanic Gardens last year. I intended a description of them, and Oulton Park, and other places, to have appeared before now, but could not get time for the pen to do what the head and the will wished. I believe that this trying season has much taxed the time and opportunities of many gardeners as well as myself. The ribbon-borders at Oulton, and the artistic arrangement at Liverpool, were exceedingly fine, and grand too, with the rain descending in torrents. Perhaps I may see them again before attempting to do justice to their beauty.

I believe that whilst human nature is what it is every place will have its own difficulties, whether it be a private or a public establishment. The success, however, of all public establishments of a popular kind (and the Liverpool Botanic eminently combines the scientific and the popular), will greatly depend not merely on the taste and genius but on the agreeable and gentlemanly manner of the superintendent. It is delightful to find that amid the difficulties of serving such a number of masters Mr. Tyerman has succeeded in securing the esteem of the Corporation, and the respect of the inhabitants generally. Long may he be spared to diffuse a ripening and bettering influence; for I had oral evidence in various quarters that his efforts were as well appreciated among mechanics, and porters, and cabmen, as among the more genteel classes of society.

It is so pleasing to find the services of a public officer duly appreciated, that I take the following from the columns of the *Liverpool Daily Courier* for the 18th of August:—

"Yesterday, the annual official inspection of the Liverpool public squares and gardens provided for the recreative pleasures of the inhabitants of this large and populous town took place, and this municipal duty was performed by the committee upon whom the highly interesting work of maintaining the gardens devolved. The committee met at an early part of the afternoon, and commenced their duties with the visitation of the various squares. These include the Great George Square, St. James's Mount, Falkner Square, Abercromby Square, and Shell Park; and we have the gratification to state that the committee were highly pleased with the condition of the whole of these public places of resort by the inhabitants of the districts in which they are located. There was a perceptible improvement in all of them, and with regard to the artistic arrangement of the flowers, the utmost credit was reflected upon the Curator. These squares, which so advantageously enlarge the lungs of the borough, and tend so greatly to the promotion of the pleasant recreation of the inhabitants, are a very important feature in the sanitary character of our local government; and it is very gratifying to find that they have not only been maintained in their full force of efficiency, but that an actual improvement is obvious to the most superficial observer. The principal object of inspection, however, was that popular place of entertainment known as the Botanical Gardens, entrusted to the horticultural skill of Mr. Tyerman. Here the committee arrived in their tour of inspection about five o'clock in the afternoon. They consisted, as usual, of the members of the finance committee, and some other members of the Corporation, who were invited to take part in the inspection; the Mayor and the ex-Mayor (Mr. R. C. Gardner), and about a dozen other of the municipal authorities being present; the Rev. H. Higgins, and other gentlemen to whom the invitation was extended, were also amongst the party.

"The Botanic Gardens, it is well known, are the most

interesting and also the most popular of the various places of public resort provided at the expense of the Corporation of Liverpool. It is, therefore, a matter of great importance to the inhabitants that they should be maintained in a manner adequate to their requirements. In the respected Curator of the gardens, Mr. Tyerman, we have no hesitation in saying that the Corporation and the public possess an official who, in botanical science, is capable of realising their expectations to the utmost. Although the season is rapidly advancing into "the sere and yellow leaf," the gardens still present the most attractive appearance; the beds, the artistic arrangement of which is admirable in the highest degree, abounding in the gayest and most enchanting combination of colours which floricultural skill could possibly display. The Botanic Gardens, with the extensive park adjoining, form certainly one of the most welcome and delightful boons to the people of Liverpool; and the high appreciation in which they are held is sufficiently indicated by the fact, that the attendance of the public includes on ordinary occasions as many as eleven thousand persons. On Thursday evenings a military band considerably enlivens the scene, and adds very appreciable charms, of a musical character, to those which Flora contributes. It will, no doubt, be as gratifying to the public as it is creditable to the skill and attention of Mr. Tyerman, the excellent Curator, to learn that on their annual inspection yesterday the committee found that the management of the gardens was in every respect unexceptionable, and that both in regard to the selection and arrangement of the flowers and plants—which, by the way, we may state, without fear of contradiction, would creditably vie with any public garden in the kingdom—the utmost care and skill had been exercised with the most successful result. The pleasures of the promenade made by the committee were agreeably enhanced by the musical performances of the band of Orphan Boys, who played an admirable selection of music on the grounds; and we need scarcely say that the duty which devolved upon the committee was throughout of the most interesting description."—R. FISH.

ORNAMENTAL GRASSES.

(Concluded from page 125.)

ANNUAL GRASSES.

A COLLECTION of the smaller species grown in pots is highly interesting, and gives a diversified appearance to mixed borders, the lively green shades and graceful forms of these Grasses adding to the beauty and variety.

Most of the species are very desirable for bouquets in a fresh state, and when cut and dried, if mixed with Everlastings, they are valuable for winter bouquets and in-door decoration generally.

The soil most suitable for Grasses is a moderately rich loam, neither too light nor too strong, but of intermediate quality. It may be formed of mellow loam two-thirds, leaf mould one-third; the whole well mixed, chopped with a spade, but not sifted. If the loam be light and poor one-third of moderately-decomposed manure may be incorporated with it in place of the leaf mould. Keep this compost under cover for a few days, so that it may handle the better in the potting.

The pots to be employed should be large enough to allow of the seed being scattered thinly, for nothing is so destructive to seedlings as thick sowing, for it causes them to spindle up, and to flower weakly and prematurely. Drain the pot well, fill it with the compost to within half an inch of the rim, scatter the seed after levelling the surface, and then cover lightly—not deeper than just to hide the seeds—with fine soil. Place a neat label to each pot, not a large one (for nothing is so out-of-place as a large label to a small plant or pot), with the proper name of each Grass legibly written upon it; for it is a great drawback to grow a plant and not be able to tell the name of it.

Place the pots in a house with a gentle heat, such as a vinery, or frame employed for striking cuttings or raising half-hardy annuals. The soil should be kept well watered, so as to secure a speedy germination; but too much moisture is apt to rot the seeds, especially when they are old; the soil should, therefore, be kept just healthfully moist. When

the seeds have germinated and the plants appear, be careful to have the pots near the glass; and when the plants are fairly up, place the pots in a greenhouse or frame, so as to prevent the seedlings becoming weak from excess of heat, giving air freely, and watering sufficiently to maintain them in a growing state.

After they are of sufficient size to handle, transplant some of the largest with balls into pots filled with the same kind of compost as for the sowing, employing pots of various sizes according to the strength or height of the species. Small kinds, as *Agrostis*, may be grown in pots 6 inches in diameter, and others in sizes proportionate to their growth. It is essential to distribute the seedlings in threes in the centre of the pot for a specimen—that is, the small patches of plants standing at the points of an equilateral triangle, varying in distance between patch and patch as the species is strong or weak, or a large pot employed. The seed-pots have the holes made in transplanting filled up, and they, as well as the newly-potted plants, are watered, and placed in a cold frame or returned to the greenhouse, watering and sprinkling overhead night and morning with the syringe, so as to secure a healthy growth. Supposing the seeds to be sown in the middle of March, the plants will be in a forward state by the latter part of April or beginning of May. Those in the seed-pots may then be transplanted into spaces in mixed borders in places not shaded or under the drip of trees, nor in spots liable to become dusty during the summer.

In planting out it is desirable to part the plants into small pieces, placing them in patches of five or more together; watering them afterwards daily if a dry period ensue until they become established, and again in dry weather after they are advanced for flowering, with clear water both at the root and overhead, sprinkling the tops, being often of as much importance as water at the root, especially in smoky, dusty places, where the pores of the plants are often choked by the accumulation of dirt. An occasional application of weak liquid manure will greatly tend to improve their flowering; and though these plants have not the grandeur of a *Dahlia*, *Hollyhock*, or some other ornaments of the garden, they, nevertheless, deserve these little attentions. If they are not thought worthy of the same care that is accorded to other plants, they are not worth their room, and therefore ought to be discarded from the garden altogether. It is the haphazard system of growing annuals that has caused many persons to look upon them as nothing but weeds. Such, also, is the case with the majority of herbaceous plants. They receive no attention whatever that may be termed "cultivating a plant," and they are discarded because not looked after. Now, I do not think there are any plants so likely to please as a selection of the best Grasses grown in pots; and though I may be a little prejudiced in favour of them, yet I have found them much admired by those for whose pleasure they were grown.

If desired to have a succession of spray for bouquets (and what is equal to Grasses for the purpose?), we plunge half the number of pots to the rim in coal ashes in an open situation out-doors, sprinkling them overhead every evening, except when a shower falling in the day renders it unnecessary, and watering them daily or bi-weekly at the root as occasion may require, so that they may never lack that element, nor are they, on the other hand, deluged with it.

Every second, watering may be of liquid manure highly diluted, or guano water, at the rate of 1 oz. to the gallon of rain water, which will do much to maintain the foliage in a green state. The pots, bear in mind, must not be crowded together, but distributed at such a distance as to afford sufficient space for the full development of the foliage, and for its being duly acted upon by the all-important influences of light and air. Under these conditions the plants will flower finely, and may be removed when in bloom to vases in-doors to mingle with flowering plants, among which they have an excellent effect.

If seed be desired one or more of each kind should be kept for the purpose, for they will not produce seed worth saving in halls, drawing-rooms, &c.

I have passed over those we have in pots in the greenhouse, which I will now revert to. They being potted off will need water and copious syringings morning and evening, beyond which they require no different treatment from other plants. They bloom a month earlier than those out-

doors, and are alike interesting, curious, or beautiful, whether left in the house to bloom or removed for decorating rooms.

Some of the annual Grasses are only half-hardy; they should, therefore, be sown from the middle of March to the last week in April, in pots or pans, placing them in a slight hotbed, and when the plants are strong and well hardened off transplanting them into the open borders, or potting them off if it be desirable to have specimens in pots. Irrespective of raising and growing them in pots, the hardy species may be sown in the places where they are to remain, in the first week in April, either in patches or in lines, scattering the seeds rather thinly, and just covering them with fine soil. Should the weather be dry after sowing, it is necessary to water the patches in order to insure germination, and to keep a constant moisture in the soil, place an inverted flower-pot over the seeds, or a thin layer of moss, or a mat, the former and the last to be removed at night, or during the absence of sun. After the plants appear remove the pots or whatever else may have been employed to keep the soil moist, and when of sufficient size to handle thin the seedlings, distributing them, or otherwise allowing room to spread. They should be thinned to at least an inch apart if expected to assume their natural character. During dry weather they should be well watered, or their foliage will turn yellow and die off at the points, and the flower-spikes will rise prematurely, and be weak and poor for the lack of this element. In fact, they cannot have too much water, if only they have room to grow, and the soil be of such a nature that stagnant water cannot lodge in it, and so render it a bog.

The species bloom at different periods; they should therefore be watched, and any that are desirable to dry for winter should be cut either just before or just after the blooming is over, for if cut too early the flower-stalk has not sufficient strength to support the head, nor are they in full character, and when cut when the seed is nearly ripe they are too brittle, and more straw-like than when gathered and dried earlier. The best time, in my opinion, is immediately after the blooming, selecting a dry day, and then drying them in the sun. Some dye them a variety of colours after they are dried, which adds materially to their beauty as winter ornaments, otherwise dried Grasses are rather tame subjects for winter bouquets.

Appended is a list of some of the most ornamental species; the half-hardy kinds, which are to be raised and forwarded in heat prior to planting out, being distinguished by an asterisk.

**PASPALUM ELEGANS*.—Pretty, 1 to 1½ foot.

LAGURUS OVATUS (Hare's-tail Grass).—1 foot. Curious and ornamental.

PENNISETUM LONGISTYLUM.—A very interesting and graceful Grass, 1½ foot.

P. ITALICUM.—Pretty, 1½ to 2 feet. These two being from the south of Europe should be raised and forwarded in heat if intended to flower the first year. The first is very fine for a neutral or centre bed, the plants being raised and grown on one season, protected from frost in winter, and planted out in the spring of the following year. Its graceful foliage and elegant inflorescence entitle it to a prominent position amongst its congeners.

HORDEUM JURATUM.—A curious Barley-headed Grass, having a rosy tint. It is a biennial if not a perennial, flowering the first year. 1 to 1½ foot.

**SORGHUM BICOLOR*.—Tall, yet graceful. 2 to 3 feet. This will not do outside in cold exposed localities.

**TRICHOLENA ROSEA*.—Beautiful, the inflorescence having a rosy tint. 2 feet. The same remarks apply to this as the preceding.

SETARIA MACROCHLOA.—Fine and graceful. 2 feet.

AVENA STERILIS (Animated Oats).—Very curious. The seed-vessels resemble a fly, and are furnished with a long, jointed awn, which twists about when subjected to moisture or dryness, and it is on this account an excellent hygrometer. 2½ feet.

CHERATOCHLOA PENDULA.—Pretty. 1½ to 2 feet.

**CHLORIS POLYDACTYLA*, *RADIATA*, *BARRATA*, *FIMBRIATA*, AND *SUBMUTICA*, are all remarkable on account of their formation, *A. radiata* being very curious. 1 foot.

CHRYSUREUS AUREUS.—A handsome variety with golden spikes. 6 inches.

ANTHOXANTHUM GRACILE.—Graceful. 6 to 9 inches.

BRIZOPYRUM SICULUM.—Elegant; foliage shining light green, plaited inflorescence. 9 inches.

BLEPHISINE CORACANA (Five-horned).—Curious. 1½ to 2 feet.

E. INDICA.—Graceful, with immensely long horns. 1 foot.

E. OLIGOSTACHYA.—Very singular and striking. This is three-horned.

ELYMUS CAPIT-MEDUSÆ.—Graceful. 2 to 2½ feet.

AGROSTIS ELEGANS.—A very pretty species of the lightest possible appearance.

A. LAXIFLORA, graceful; *A. PLUMOSA*, flowering in plumes; *A. PULCHRELLA*, with nothing more pretty about it than the rest of the *Agrostides*, are all charming for bouquets either green or dried.

A. NEBULOSA.—One of the most beautiful if not the most graceful of the smaller Grasses. 1 to 1½ foot.

EGILOPS CYLINDRICA, with curious knotted inflorescence, is both curious and pretty. There is a prevalent opinion that it is the wild form of the cultivated Wheat; but having grown it some years I am certain man never was indebted to this plant for the "staff of life." Botanists refer the wild Wheat to a form of *Egilops ovatus*—viz., *Egilops triticoides*. I may state, however, that *Egilops ovatus* does not assume another form so far as my experience goes; and as for the degeneration of the Wheat plant into an *Egilops*, as asserted by Galen, it seems to require confirmation. Should any of your readers come across the alleged wild type of the Wheat plant (*Egilops triticoides*), producing seed, I should esteem it a favour if they would send me a few seeds through the Editors.

ERAGROSTIS CYLINDRIFLORA.—Pretty. 1½ foot.

E. ELEGANS (Love Grass).—Fine. 2 feet.

E. MEGASTACHYA.—Elegant and very pretty. 1½ foot.

BRIZA GRACILIS.—Very pretty and curious. 1 foot.

B. MAXIMA OR *MAJOR* (Large Quaking Grass).—2 feet.

B. GENICULATA.—A charming species. Fine for bouquets. 9 inches to 1 foot.

**HOLCUS SACCARATUS*.—A stately plant, alike graceful, elegant, and ornamental. It produces a fine effect in mixed borders, and is desirable on account of the changeable character of the foliage and its delicate perfume. There are over a dozen varieties of the species all more or less advances on the parent, except that they do not grow so tall. It should be sown in heat, and put out in a forward state, otherwise it will not flower.

ZEA OR *INDIAN CORN* is a stately Grass for mixed borders, being bold and handsome in foliage, attaining a height of from 3 to 7 feet. There are numerous varieties varying in habit and with different coloured heads of corn. For these to do well it is desirable to sow the seeds, three or so in a 24-pot, and grow the seedlings in a gentle heat, so as to plant them out in May in a forward state.

G. ARRY.

At some future time I may add an article or two on "Cultivated Grasses," especially those employed for laying down lawns, with a few hints on the best kinds for parks, meadows, &c., about gentlemen's houses.

RULES RELATING TO HYACINTHS GROWN IN GLASSES.

THESE rules may be learnt in five minutes, and if followed, will, I am persuaded, be attended with satisfactory results.

1. If you choose your own bulbs, look for weight as well as size: be sure also that the base of the bulb is sound.

2. Use the single kinds only, because they are earlier, hardier, and generally preferable for glasses.

3. Set the bulb in the glass so that the lower end is almost, but not quite, in contact with the water.

4. Use rain or pond-water.

5. Do not change the water, but keep a small lump of charcoal at the bottom of the glass.

6. Fill up the glasses with water as the level sinks by the feeding of the roots and by evaporation.

7. When the bulb is placed, put the glass in a cool dark cupboard, or in any place where light is excluded, there to remain for about six weeks: the roots feed more freely in the dark.

8. When the roots are freely developed, and the flower-

spike is pushing into life (which will be in about six weeks), remove by degrees to full light and air.

9. The more light and air given from the time the flowers show colour, the shorter will be the leaves and spike, and the brighter the colours of the flowers.—(*W. Paul's Lecture on the Hyacinth.*)

PROTECTING WALL FRUIT FROM ANTS.

LAST year I was very much troubled with ants, and, although I tried every remedy suggested to me, failed to get rid of them. This year they were equally numerous and troublesome, and commenced their depredations on my Morello Cherries. I at once opened the campaign, determined if possible to conquer them. As I have a great objection to the use of poisons unless under great necessity, I thought I would first try syringing the trees with a decoction of elder. This was a failure. I next tried a decoction of quassia; but although it drove them away for a day or two they soon returned. Pepper was the next application, and that was only partially successful.

They now began a vigorous attack on my Apricots. Here I tried crude gas water poured under the trees against the wall. On examining the fruit the next morning I found an Apricot hanging within 6 inches of where the water had been poured swarming with them.

I thought I must now try poisons; so obtained some corrosive sublimate, strychnia, arsenic, and cyanide of potassium. Each of these I separately mixed with either sugar, honey, or treacle, and carefully placed them under inverted flower-pots, the holes of which I closed to prevent bees from entering. The ants had free access; but with the exception of the solution of cyanide of potassium and sugar, in which I found four or five, I could not discover any dead lying about. At first I thought perhaps other ants had removed the bodies; but a few days afterwards, on examining a piece of paper on which I had placed some treacle and arsenic, I found that while there was no trace whatever of treacle the arsenic remained. From this I conclude, that where the substance employed with the arsenic does not thoroughly dissolve it, the ants can discriminate, and only take that which is agreeable to them.

Finding that poison did not succeed, I placed some soot along the base of the wall. This prevented their getting up; but I then found that they visited me from the opposite side, and many took up their abode in the interstices of the wall.

My last, and I hope my most successful attempt, was with gas tar, but not quite in the manner recommended in your Journal. I first had one of the courses of bricks a few inches from the ground tarred the complete length of the wall; and then, as I thought if tar were put on the trees it might injure them, a slip of carpet was tied round each stem. This was also tarred over so as to completely insulate the bearing part of the tree. Next I daubed some tar here and there on the wall to drive off stragglers, and finally tarred the top of the wall to prevent their return. This has now been done some days, and since then up to the present time I have not seen one on the walls. It is necessary to mix some grease with the tar to prevent its drying, and should the bricks absorb it rapidly a second or third coat would be desirable.

My object in troubling you with these remarks is more to prevent your readers from using arsenic and such violent poisons in their gardens than to show the advantage of tar, as in the latter, I am aware, I am suggesting nothing new. I may mention, to show how dangerous it would be to have poisonous mixtures lying about, that a short time since I placed in my greenhouse, with the intention of killing flies, some treacle and quassia. Shortly afterwards I noticed on two or three of the Grapes some little dark spots. These I found to be the treacle, probably carried by wasps or some of the larger flies. Suppose, instead of using quassia I had employed some strong poison!—AMATEUR.

MESSRS. PAUL & SON'S ROSES.—In addition to Mr. W. Paul's and Mr. Turner's Roses, as mentioned at page 146, Messrs. Paul & Son's, of the Cheshunt Nurseries, were requested by the Princess of Wales to be sent to Marlborough House.

NEW BOOK.

UTILIZATION OF MINUTE LIFE.

The Utilization of Minute Life; being Practical Studies on Insects, Crustacea, Mollusca, Worms, Polypes, Infusoria, and Sponges. By Dr. T. L. PHIPSON, F.C.S., London, &c. London: Groombridge & Sons.

THE object of this interesting little volume is to give not only a correct idea of various minute animals, which either are themselves, or whose products are utilized in various arts and manufactures, but to inquire whether they "cannot be submitted to culture, and propagated more extensively by artificial means, and thereby the benefits derived from them increased." The contents of the volume are divided into chapters, devoted in succession to silk-producing insects, colour-producing insects, insects producing wax, honey, &c., insects employed as medicine and food by man, crustacea, mollusca, worms, polypes, infusoria, and sponges. We do not object to such divisions, though they might be improved, but we do complain that there is no index. Such a book without an index is almost as embarrassing as an upper chamber without a staircase.

We can only afford space for one extract, but it will enable our readers to form an estimate of the work.

"Many philosophers, from the time of Priestley and Ingenhouz to the present day, have studied the influence of light on vegetables, but few have paid attention to its action upon the animal organism. Thus, whilst Priestley, Ingenhouz, Sennebler, De Candolle, Carradori, Knight, Payer, Macaire, and some others, made manifest the action of light upon vegetable respiration, absorption, exhalation, &c.—in a word, upon the phenomena of nutrition and development in plants, Edwards and Morren were almost the only observers who studied animal life from the same point of view. Edwards showed that without light the eggs of frogs cannot be developed, and that the metamorphosis of tadpoles into frogs cannot be effected in absolute darkness.* Again: Moleschott has recently shown that the respiration of frogs is most active in the daylight, diminishing considerably during the night; and Charles Morren observed Infusoria to evolve oxygen whilst basking in the sunbeams which play upon the stagnant waters they inhabit. Later still, M. Bernard took a certain quantity of eggs of the fly (*Musca Cæsar*); he divided them into separate groups, and placed them under different coloured glass jars. In four or five days, the larvæ produced under the blue and violet-coloured jars were much larger and more fully developed than the others: those hatched under the green jar were the smallest. The blue and violet jars were found, therefore, to be most favourable to rapid and complete development; then came the red, yellow, and white (transparent) jars; and last of all the green.

"The larvæ developed in a given time under the influence of violet light were more than three times as large as those hatched and reared in green light.†

"The experiments are certainly very interesting in a practical point of view; for if it be true, as it appears to be, that the larger a silkworm is the more silk it will produce, it would be worth while to repeat these experiments upon silkworms, and endeavour to raise a large breed under violet glass.

"Nothing would be easier than to select a portion of some silkworm establishment for the experiment, and to furnish this section of the building with violet-coloured windows. It would, indeed, be interesting to see these violet-coloured panes become as necessary to the silk-breeders as the yellow window is essential to the photographer. In the former instance the violet would serve to allow the chemical rays of light to pass, while the other rays are excluded. In the latter, the yellow is used to cut off these chemical rays, and to let pass the remainder."

* Compare Hugginbottom in "Proceedings of the Royal Society," 1863; where some experiments of Edwards are refuted.

† The effects of the sun's rays, when filtered through differently coloured glass, upon the development of infusorial life, has recently occupied Mr. Samuelson. He fitted up a box containing three compartments, covered by a pane of blue, red, and yellow glass respectively, and found that under the blue and red glass infusoria were rapidly developed, whilst under the yellow hardly any signs of life were visible. He then transferred a portion of the infusion from the yellow to the blue compartment, when infusoria very soon made their appearance.

"EYES AND NO EYES."

I beg leave to thank you very much for the excellent article on "The Education of the Eye," which appeared in your Number of the 9th inst. I hope all the gardeners in England have read it, or will read it. You have given us various articles lately respecting the education of gardeners, but let a gardener be as well educated as he may in other points, if he has not an eye, he is worth little or nothing.

You will see one man sweep out his greenhouse, but he never thinks of removing from the plants the yellow and decayed leaves. Another man walks by a flower-bed day after day, where half a dozen weeds stare him in the face, but he never stoops down to pluck them up. When a master who has an eye in his head points out to his gardener these same weeds and withered flowers, and suggests that the greenhouse and the flower-bed would look better if such eyesores were removed, what answer does he get? "Oh! yes, sir, we shall get to them in a day or two."

The meaning is plain. Most gardeners, even when they have plenty of help, go through their work in a regular circle like a horse in a mill, and so in part they ought to do; but meanwhile they should have their eyes open, and always, every day, be doing a little here and a little there, just as things happen to be wanted. A gardener ought to manage his ground as a housemaid does her drawing-room: she makes all things clean and right every morning, and then in the afternoon walks through the room and puts it in order. This is what a gardener should do with the place he has to keep. If he does not, if he lets his pots be dirty and green, if he allows decayed leaves to hang here, and weeds to grow there, do not let him excuse himself by saying he has not time. Such matters as I speak of take little or no time. Indeed, attention to them will save time in the long run. What the man wants is, not time, but "an eye," and to give a man an eye if he has not one is the hardest thing in the world. I have taken endless trouble with men for years, but all in vain. I sincerely hope that your article may have better success.—A MAN WITH AN EYE.

ENTOMOLOGICAL SOCIETY'S MEETING.

THE August Meeting of the Entomological Society was fairly attended for the season of the year, the chair, in the absence of the President, being occupied by the Rev. Hamlet Clark, M.A., who communicated a valuable memoir on new species of Water Beetles, belonging to the genus *Hydaticus*, of Leach, from Australia, China, and the Gold Coast.

A paper was also read by W. C. Hewitson, Esq., containing descriptions of six new and beautiful exotic species of Butterflies from the northern parts of India and the island of Menado, Borneo. Another paper, by Mr. Baly, was also read, containing descriptions of new exotic species of herbivorous Beetles, belonging to the Calopepla and allied genera, preceded by some interesting observations on the geographical distribution of these insects.

Mr. Frederick Bond exhibited a specimen of *Gelechia pinguinella*, a small species of Moth, belonging to the family Tineidae, new to this country, which had been found on the trunk of a Poplar tree near London; also, *Nyctegretes Achatinella*, one of our rarest Moths, of the family Phycidae, captured by Mr. T. Brown near Yarmouth.

Mr. McLachlan exhibited a specimen of a Dragon Fly, *Libellula striolata*, from the south of France, the longitudinal veins of the wings of which, near the base, were dotted with numerous scarlet points, which proved to be minute Acari (*Gamasus Libellulae*), and it was suggested that these parasites had occupied this position in order to obtain food from the circulating fluid within the veins of the wing surrounding the central air tubes of those organs. Mr. F. Smith, however, stated that he had found Acari on the hard horny bodies of Beetles and Bees, where they could not obtain such kind of nourishment.

Mr. J. J. Weir exhibited an albino variety of *Eubolia bipunctaria*, one of the Geometridae, taken on the Southdowns.

Among the donations received since the last Meeting, were the publications of the Royal and Zoological Societies of London, the Royal Societies of Madrid, Moscow, Munich, Stettin, &c.

MR. B. S. WILLIAMS'S VICTORIA NURSERY, HOLLOWAY.

SOME three months ago our correspondent Mr. Earley directed attention to the Victoria Nursery, which Mr. Williams has formed at the foot of Highgate Hill, and we have now the pleasure of presenting our readers with a view of the interior of the simple but elegant conservatory and show-house which has been constructed under Mr. Williams's direction.

This house is 105 feet long, 45 feet wide, and 20 high to the ridge, the sides being about 10 feet in height. The frontage to the road is light and of an architectural character, there being six plate glass windows on each side of the door, separated by columns, and surmounted by ironwork of an ornamental vine-leaf pattern. As regards the general aspect of the interior, our engraving, taken from a photograph, will give the best idea.

The floor is of Portland cement, the paths being marked off by a simply moulded iron edging. The central pathway is 7½ feet wide, and another crosses it at the middle of the house; one of Pulham's terra-cotta fountains, planted with Ferns, being placed at the point of intersection. Another path 5 feet wide leads all round, between which and the glass is a slate platform.

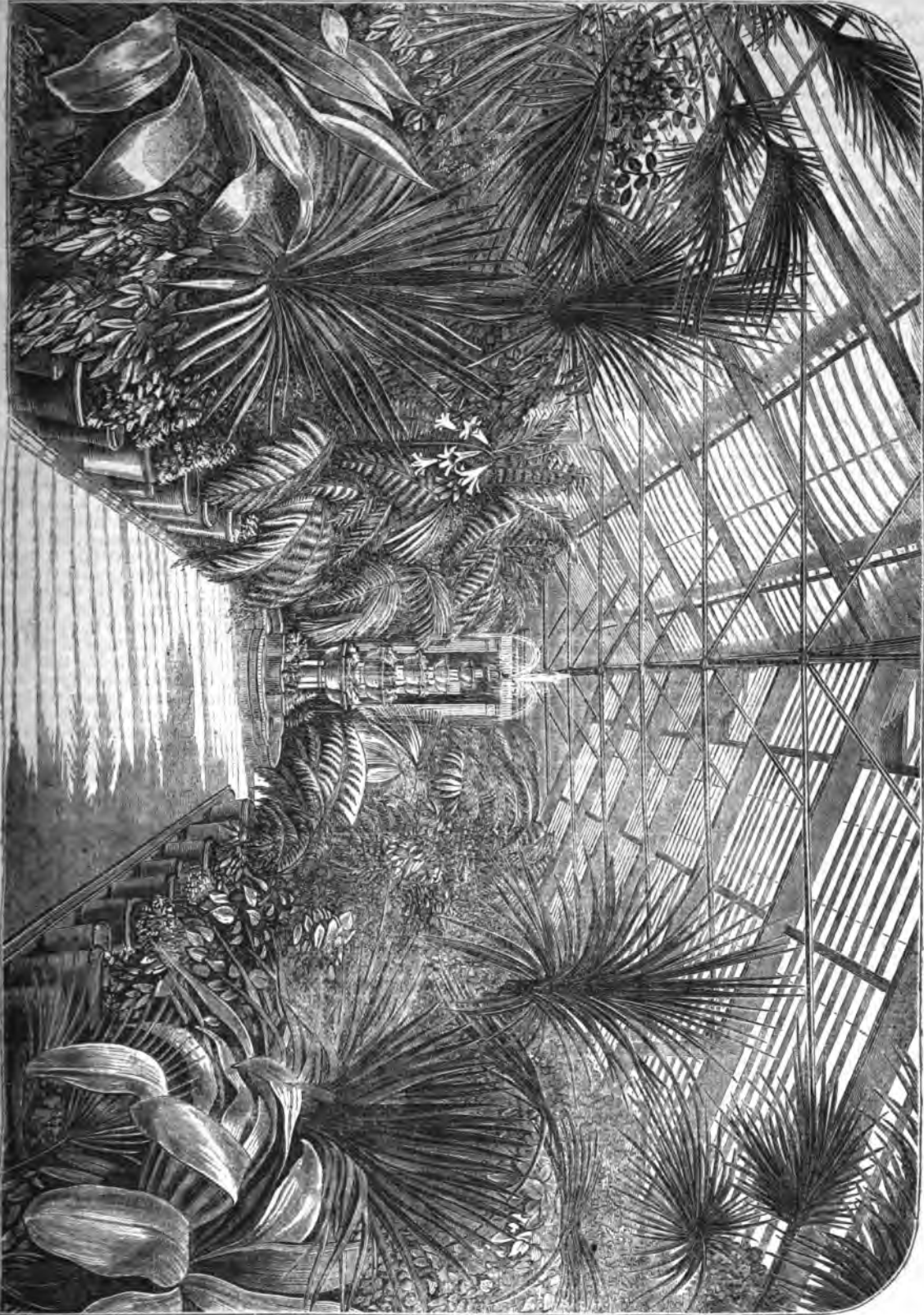
The roof, which is fixed, is supported by eighteen hollow wooden columns and trussed with iron; and ventilation is effected by hinged sashes at the ridge worked by ropes and pulleys, and by side lights opening in the same manner. For heating there are four flow and return four-inch pipes running beneath the slate shelving and nearly on the same level as the floor.

The mode of shading adopted is worthy of notice, for, unlike most conservatories, the tiffany which is employed is placed inside instead of outside the glass. Near the ridge there is a roller between every pair of rafters, on which the tiffany is wound; and attached to the lower edge of the tiffany is a rod running in guides on the rafters. By pulling a rope this rod readily descends, bringing the tiffany with it; and by means of a pulley, when the shading is no longer wanted, the whole is wound up.

We will now take a glance at the contents of the house. On each side of the central path are ranged in match pairs fine plants of *Yucca aloifolia variegata*, *Chamærops humilis*, *Cibotium Schiedei*, and *Dracæna australis*, two handsome specimens of which, standing some 12 feet high, are conspicuous in our engraving. Then at the fountain, where the main pathway and the cross-walk intersect, are two plants of *Dicksonia antarctica* 6 feet high, one on each side; and occupying a similar position on the opposite side are large specimens of *Latania borbonica*, backed with noble specimens of *Cyathea excelsa*. Further on we come to a remarkably fine *Zamia Lehmanni*, its singular scarred stem 3 feet in circumference; *Marattia elegans*, with seven fronds 5 feet long; and noble specimens of *Cycas revoluta*, *Cyathea dealbata*, and *Yucca Boerhavi*, the last very ornamental and tropical in its aspect. At the end of the walk is *Cibotium princeps*, with fronds extending 12 feet across; and two fine trees of *Araucaria excelsa*, touching the roof, stand sentry on each side of the door of the former residence of Sir Richard Sutton, which constitutes the further extremity of the conservatory. The splendid Indian *Rhododendron Nuttallii*, which produced such a profusion of its immense white and yellow sweet-scented flowers, and which was a conspicuous object when the photograph was taken, is, of course, now out of flower, but it may be observed figuring prominently in our engraving. The plant was then 10 feet high and 7 feet through, and had as many as ninety flowers on it at one time.

Along the side-shelves were ranged a large collection of Agaves, Yuccas, *Dasyliirions*, &c. Among them were the new *Agave schidigera*, the white cuticle of which appears as if torn from the thick substance of the leaf; *Yucca Stokesii* with large and showy foliage, the singular Australian Grass tree, which Mr. Williams has several times exhibited during this summer at the great metropolitan shows; and in the body of the house was *Dasyliirion acrotrichum* with a flower-spike standing 8 feet high.

The other parts of the nursery are not yet completely organised, for walks of increased width are to be made,



and several glass houses to be erected. Two, each 45 feet long and 33 wide, have just been commenced, and besides the conservatory four span-roofed and two octagon houses already exist. These are variously filled with New Holland plants and Ericas, softwooded plants, and a large stock of Royal Vineyard Vines and Charlotte Rothschild Pines.

THRIPS.

ONE peculiarity of the present remarkably dry season is the swarms of small black thrips which fly about in immense numbers, frequently settling upon our hands and face as we go about the garden. They infest many of the flowering plants, and, in some cases, do a great amount of mischief. Dahlias, Phloxes, Verbenas, and Geraniums, all suffer more or less from their ravages; but they seem to have a peculiar liking for flowers of a rose or pink colour, such as *Saponaria calabrica*, and, especially, *Geraniums* Rose Queen and Christine. Wherever there is a plant of either of these *Geraniums*, in the beds, or singly in the borders, every flower is destroyed as it opens. I have whole beds with scarcely a single bloom, to say nothing of trusses, that is perfect, while beds close by, filled with other varieties, are comparatively unharmed. The thrips find their way inside the calyx, and, under its protection, eat away the base of the petals, the remainder falling down upon the foliage. I have tried repeated applications of Gishurst compound, 2 ozs. to the gallon of water, but that produces little or no effect upon them, perhaps from the fact that they are buried in the calyx of the flower. More than once I have taken off all the flowers and burnt them, thinking the next lot that opened might be free, but the succeeding blooms shared the same fate as the others. The *Saponaria* suffers in just the same manner, each bloom being destroyed as soon as it opens.

I should like to know whether this state of things is general, and why flowers of this particular shade should be such an attraction to these insects, while those of a different colour, although of the same genus, are comparatively free from their attacks.—J. JONES, *Manchester*.

GRUBS AT THE GREENS.

WHEN I went to school there came occasionally, once a half year or so, an old gentleman to give us a lecture on chemistry. His experiments were, I am afraid, all we cared about. What was to be heard passed unheard by the majority, but what was to be seen attracted all eyes. I regret to say, also, that we delighted in taking pen and ink sketches of the Professor in various attitudes; his long nose, spectacles, and pointed chin, were attractive to the caricaturist. But what I want specially to remark upon was, the fact that on chemical-lecture days the under masters sat with the boys as learners.

Now, to day I wish to sit with the boys. I write not to inform, but to get information. My Broccoli plants and other plants of that class are attacked by a horrible grub, such as I never had the pain to be acquainted with before. I saw one day, two or three plants leaning on their sides, and looking flagged. On approaching them I found they were all but severed at the part of the stem just below the surface, on examining which stem I found it was bored like a gun. Pulling up the root I scooped away the earth with my fingers, and, lo! a little way down was the offender—a flat, yellowish green grub, curled up in a semicircle. I find all my neighbours are suffering similarly, doubtless the dry season is to blame. I saw a large bed of Lettuces reduced to five. Then, I hear that Onions, Leeks, and Carrots are also attacked. As to my battalions of Winter Greens, they look as if they were General Grant's battalions cut up by Southern cannon balls. If you please, I want to be told a remedy for my plants against these pests, for I am tired of finding them and crushing them on the path, as the cry is "Still they come." I do not care about the scientific name of my enemy, possibly it is "*Yellowgreenius grubbensis*," the product of "*Musca tormentor gardenarii*." These names will suffice for me; but I want to exterminate the foe. Lime water has been tried but has failed. Will you befriend your troubled—WILKINSON EACTOR?

[What heresy! "Not care about the scientific name!"] Now, if you were told the scientific name you might thence comprehend the parentage of the marauders, and though there is no application known which will kill the grubs whilst it does no injury to the plants, yet there might be something sprinkled over the surface of the soil at another season of the year which would prevent the mother depositing her eggs there. However, you do not wish to know

the scientific name, and we will merely say that your "*yellowgreenius grubbensis*," is known to, and characteristically described by gardeners as the "*Leather-coat*," for a tough-skinned adversary he is. The only remedy is (without intending a pun), to grub round each plant in a bed so soon as you see that one plant in it is attacked. Such a proceeding only seems tedious, for one woman with an old dinner knife will prove the conservator of a large bed of Broccoli in a single day.]

WORK FOR THE WEEK.

KITCHEN GARDEN.

THE haulm of Peas, Beans, &c., should be cleared away as soon after the crop is over as possible, and the ground manured and trenched to be in readiness for planting. Cabbages, the seedling plants intended to stand through the winter, to be now pricked out in nursery-beds of light soil at 5 inches apart. This will be found of great advantage, by inducing a hardy stocky growth. Celery, proceed with the earthing-up according to the demand. Some of the very latest crop may also be planted in rows to stand through the winter. The haulm of Peas laid by now in a dry place is a good material for covering Celery during severe frost. Endive, continue to make successional plantations. Some of the first planted out will now be in good condition for tying-up for blanching. Lettuce, a small patch of Bath Cos sown now will, if the autumn prove mild, be more valuable than that sown earlier. Onions, no time should be lost in storing the crops when fully dry; as the ground from which they are taken is generally used for Cabbage, it should be immediately trenched-up. If manure is necessary, let it be laid on the top of the trenched soil and fork it in. If, however, the ground was well manured for the Onions it ought to carry the Cabbage through, because if too much manure comes in contact with the roots in the autumn, it induces a succulent luxuriant growth, which renders the plants liable to injury from alternations of frost and thaw in the winter. Radishes, these may still be sown. Spinach, thin out the Winter, the plants to stand at least 8 inches apart, and the ground to be constantly stirred about. Occasional dustings with quicklime will also be necessary if slugs appear. Tomatoes, any that are likely to be late should have the leaves that are shading the fruit removed, and prevent the plants making any further growth by constant stopping.

FRUIT GARDEN.

NOW that we have arrived at a season which generally matures the more important fruits usually cultivated in our gardens, it may be advisable to mention a few of the necessary precautions to be observed in the storing and gathering of fruit. Peaches and Nectarines should not be allowed to remain on the trees until they are what is termed dead ripe. A little practice will enable a person to determine the degree of ripeness at which fruit should be gathered, without resorting to the common and barbarous way of pinching. Plums should remain till perfectly ripe, the large amount of saccharine matter in the fruit acts as a preservative, and although something may be lost in bulk by their being allowed to remain on the tree, the flavour will not be deteriorated. Such as *Impératrice* and *Golden Drop*, if protected from wasps, may be kept until a very late period in the season. Apples and Pears generally fall as soon as they arrive at any degree of ripeness, that period must be anticipated, and their removal effected as soon as its approach is ascertained. After gathering, the fruit intended for keeping should be laid out in the fruit-room for a week or ten days and exposed to a free circulation of air. The fruit will be found clumsy from perspiration, it should then be carefully wiped and laid out thinly in the store-room, which should be kept, as soon as the fruit is introduced, securely closed and protected from the alternations of temperature. If Apples and Pears are gathered carefully without contusion, and sorted at a proper period, so that all defective fruits may be removed, they may be preserved with very little loss, and found in a plump highly-flavoured condition throughout the winter season. When mulching has been used for Peach and Nectarine trees, it should be removed at once, for the fruit is seldom well flavoured if the roots are excluded from the action of the sun and air during the period of ripening. See that the

Strawberries in pots for forcing next season are well cared for, placing them in an open sunny situation where they will have all the light possible, and do not allow them to suffer from want of moisture at the root.

FLOWER GARDEN.

As the numerous varieties of *Verbena* are now in bloom, the best kinds should be selected for bedding out next year, also the particular habit and colour should be noted for the better arrangement of them at planting-out time. The same observation holds good in regard to new *Petunias*, *Fuchsias*, *Pelargoniums*, *Calceolarias*, &c. Give diligent attention to the propagation of bedding-out stock, and get cuttings that are sufficiently rooted potted off at once, keeping them close until they become established. Those that have been potted off some time, and are established in their pots, should be inured to exposure to the open air, stopping the shoots to keep them dwarf and stocky. *Wistaria sinensis*, *Jasmines*, and the *Virginian Creeper*, may be propagated by cuttings. *China Roses*, *Heartsease*, or the *Tree Violet*, may also be increased now. *Mignonette* for winter and spring flowering may be sown. The work of mowing and general cleaning must be well followed up.

STOVE.

As the nights become cold a little fire heat may be given, not with any intention to promote growth, but to assist in ripening the succulent wood. See that everything is free from insects, and keep the foliage of such things as *Ixoras*, &c., clean by washing with a sponge and soapy water when necessary.

GREENHOUSE AND CONSERVATORY.

Let the stock of *Begonias* have another shift if not already in pots large enough. *Lilium lancifolium* will now be in its beauty. Supply it bountifully with water, and shade the flowers from powerful sunshine to prolong their gaiety. Pay attention to *Chrysanthemums*. They must not be stopped later than this to have fine heads of bloom. A little liquid manure will assist them. Let it be applied twice a week. *Heliotropes*, *Verbenas*, *Scarlet Pelargoniums*, and *Roses*, required for decorative purposes, should be progressively shifted, stopped, and trained. They will be found useful till a late period of the year. *Cinerarias* and *Chinese Primulas* are common plants which cannot be put aside, and which amply repay attention bestowed on their culture. The earliest-struck *Pelargoniums* should now be potted off and kept close under glass for ten days or a fortnight, and then expose them on all occasions to the weather, except during heavy rains. The older plants first cut back, which have made shoots an inch or two in length, should now be shaken out of their old soil, the roots trimmed, and repotted in smaller pots. If they can be plunged in a slight bottom heat till the roots get a start it will help them. To have a late bloom of *Fuchsias* let a portion of the stock have their young wood cut back about one-half. If these are placed in a little heat they will break again, and go on blooming till Christmas.

PITS AND FRAMES.

Make a sowing of *Nemophila insignis*, *Collinsia bicolor*, *Leptocarpus densiflorus*, and other hardy annuals for next spring. The Intermediate Stocks will require to be pricked out into pans or boxes, and afterwards potted singly in small pots, using good stiff loam; likewise the *Schizanthus* of sorts. Place them in a cool close frame till well established.

W. KRAWE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

We are still pretty much at a standstill. We had a few slight refreshing showers on Sunday, the 21st, just enough to wash the foliage and damp the surface of the dust-dry earth. We feel sure that our time of visitation will come, and as we can do no better we must patiently wait for it. On the 20th we could see rain falling heavily a few miles distant, and on the 21st, at less than two miles off, we could see it falling copiously, whilst it came to us in drops. We have long noticed that thunder clouds break on our heights and discharge their contents in the surrounding valleys. A scarcity of water in elevated positions does something to counteract the importance of an invigorating atmosphere and extended varied landscapes.

The well that supplies our mansion is nearly 800 feet in depth. From that we quietly for a time borrowed a few painfulls a-day for syringing purposes, using it after it had stood in the sun. If we take a potful now it is pretty well as good as stealing it, as the place has been put under lock and key. With our limited geological lore we do not think the precaution will avail much, as if not a drop of water was taken from the well, it would, we believe, sink to the same level as the surrounding streams, all of which are several miles distant. We shall be agreeably disappointed if many deep wells do not become dry and require sinking in November and December, and that not so much owing to the drought of summer as to the deficient rainfall in winter and early spring. That deficiency if it occurs will be little influenced by the using or refraining from using the water in such wells now. It is vain to suppose that the water will remain at the same level in the well, because not drawn, just as water in a barrel would do, because the tap from it was keyed up. If there should be a deficiency of water in wells in winter, it is cheering to think that in all probability there will be plenty of surface water.

The parching dryness of the atmosphere has also been a peculiar feature of this summer's drought. On the principle of compensation, it has generally happened, that the drier the weather, the more was the atmosphere charged with vapour, and that vapour, independently of affording relief to the foliage of plants, even by day, was generally precipitated in copious dews in clear, starry nights. We have had, it is true, such refreshing dews, but not at all in proportion to the warmth of the day, and the clearness and cool atmosphere of the night. With a heat during the day little less than that of the tropics, and a coolness at night something in proportion, we have had nothing like their heavy dews, and that solely owing, we believe, to the dryness or deficiency of vapour in the air. This dryness has rendered the air more burning in bright sun, and more chilling in clear nights. After such a bright day as the 24th, and a clear night following, there was but little dew, and that was a crust of hoar frost at 4.30 A.M., and from water we lifted ice, not so thick as a shilling, but thicker than a sixpence. A good number of large cerymbs of *Scarlet Geraniums* had their petals whitened and browned as if a hot iron had been placed near them. With all the advantages of drainage to gardens and fields, it may be possible from lessening the surface of evaporation, to render our atmosphere in the southern and eastern counties drier than may be desirable.

There is a little matter here which we would be glad to ventilate. We have a large pond between the garden and the farm, fed by rainfall from some buildings, but chiefly by drainage. For both establishments it was considered a main supply; the water, when pumped into a cistern, being conveyed in pipes to the houses in one case, and to sheds and troughs in the other. That has been quite dry since the beginning of June. It was surrounded, except for a little space at the north end, by trees and bushes, such as *Ash*, *Oak*, *Thorn*, &c., presenting not only a thicket at the sides, but the branches pretty well meeting in the centre of the pool, and affording a thickish shade in the summer months. Partly from the idea that the roots of these trees absorbed and made conduits for the water, and partly from the leaves falling and, in the course of years, tainting the otherwise clear water, it was resolved to cut down most of these trees. Now, allowing that the fallen leaves might be obnoxious when pure water was desirable, our own opinion is, that it was a mistake, so far as keeping water was concerned, to cut down these trees, as we believe that from their arresting evaporation from such a large surface of water they quite made amends for what the roots in the bank might absorb; whilst, by their removal, the whole of the moisture condensed by the foliage was lost. We have stood of a morning and heard a brisk shower of condensed moisture patter into the pool, when all outside was dry. The more pointed the leaves of the trees, so as to become sooner cooled, the more powerfully would they act as condensers of the surrounding vapour. Even in the case of a *Beech* tree that overhung a road, we recollect noticing, by means of shallow vessels placed below a portion of it, that in one morning it condensed and threw down not less than twelve gallons. The question to be solved, then,

is, whether such reservoirs should be shaded or exposed. As preservers and feeders, we think the trees an advantage rather than otherwise. In an agricultural point of view there can be no question of the improvement of throwing a number of small, crooked, unsightly meadows into one straight-sided field, and thus grubbing up much hedgerow bushes, and timber. This, however, may be carried to such an extent as greatly to lessen the water supply.

One of our chief jobs during the week has been cleaning and greatly enlarging a simple reservoir for surface water when it comes. This simple reservoir is placed among trees at the back of a range of sheds; a wide road separates the sheds from the west garden wall, and inside of the wall are the main houses and Melon ground. The water from the houses goes into a cement-tank, which now contains our only supply, at present just $1\frac{1}{2}$ inch of water, and which we use as carefully as if it were wine. All that falls on the Melon ground, and paths, and spaces between the pits and frames, and also on the glass of most of such pits, and on the roadway, we mean to divert into this simply-made reservoir. When much smaller it did us good service, and if we have such thunder showers and winter rains as we used to have, we know that we shall have it full before spring.

This reservoir dug out of the clay, is, for its main part, $5\frac{1}{2}$ feet deep. It is an oblong square 19 feet by 15 feet at bottom, and 25 feet by 21 feet at top, so as to give a good slope to the banks, the slope being fully 7 feet. In addition to the oblong, for convenience and to lessen the swell of the water against the sides, we have a small neck at the corner 7 feet deep, 4 feet square at bottom, and 8 feet at top, for the pipe of a common iron pump to go in, the pipe being cased in a wooden box pierced with holes to let in water, and keep out mud, of which we believe there will be little. This smaller neck has its sides tarred, and road drift thrown on, and some old slabs placed against the sides, kept in their places by cross pieces jammed in between slab and slab. These were added to secure the banks there, as previous experience told us that with the action of the pump, &c., it was the point where the swell was likely to injure the banks. We have the main banks all beaten smooth and uniform in slope, and to-day we expect to cover them all with a thin layer of tar, on which we will throw as much road drift and sand as it will take in, and then draw a clean spade over it, when it will resemble a well, and besides the digging, the whole expense will be a few shillings. The bottom, by the treading, will be watertight enough, but for neatness and ease of cleaning afterwards, we may also give that a coat of tar, and beat an inch of fine gravel into it. We do not expect ever to have much sediment, unless when there are very heavy thunder showers that will pretty well defy our cesspools.

We have tarred the sides for this reason. Previously the pool held the water well enough when it stood in it some time, but as we drew it out and the sides became exposed, the clay cracked; and then when we had a fresh supply from rain, if enough to raise the water in the reservoir a couple of feet or more, it quickly subsided through these cracks until they were fully swelled up. This was very little lessened even by a covering of turf. A little straw or branches were the best protectives. We have no fear of our tar-covered bank cracking except by frost in winter, and that will be best prevented by hanging some straw over that part not covered by the water. We may mention that the overflow of our cement tank will also find its way to this clay reservoir. In former years this tank overflowed every winter, and we were also forced to make an overflow from the reservoir, but for two years past this tank has never been nearly full.

We do not expect that for six or eight months our reservoir, coated with tar, will furnish water sweet enough for a teakettle, or, perhaps, for some plants extra tender, but for all out-door vegetables and plants in general the slight taint of the tar will be advantageous rather than otherwise.

As to getting the water, if we have anything like an average rainfall, we feel sure from the space at our command that this huge place will be full before spring. The mode of conveying water to the reservoir is as simple as possible. The road in front of the sheds is smooth and hard; and instead of being rounded in the usual way, it slopes a little from east to west, the west side next the sheds terminating in an open drain or culvert—that is, for a space 18 inches

wide the centre may be about 2 inches lower than the rest—quite sufficient to take a great flow of water to a deep cesspool, from the top of which it flows into the reservoir. The water that falls on the Melon ground is intercepted in the same way. The most of the low pits have no spouting, as that is sure to come in the way, but immediately in front the ground has been tarred and sanded, and in some cases the front wall also. The ground between the pits is lowest in the middle; and from thence by slightly hollowed open culverts, so shallow as not to be noticed unless in a heavy rain, the water from a heavy shower is conveyed to several cesspools, from which the contents are taken in one drain across underneath the road. With but little trouble, therefore, a great quantity of water may be secured and stored.

Had we obtained some of those heavy thunder showers that fell within a few miles of us, we would in this clay reservoir have had 2 or 3 feet of water all over, which of itself would have made us independent as to moisture. As it is, all that we have been able to do is to mulch and shade to keep things alive, and having for years rather prided ourselves on fine autumn Peas, we fear that this season we must soon go without. We also fear that we shall have some bolted Celery this year, for even our sewage water has been so scarce that for several weeks the Celery has been left to its fate, merely mulched with tree leaves and shaded a little with branches. As yet, however, it shows no great signs of distress.

We have lifted lots of our pricked-out vegetables, and planted them with balls, just giving each plant a homoeopathic dose. Those planted out early have done well in all the heat, with no help but frequent surface-stirring; and in the case of Cauliflower a little mulching. We shall be obliged to mulch Kidney Beans and Scarlet Runners if we wish to keep them vigorous. Unless the liquid is of an enriching nature, we are sure that much of the slight waterings given by some people does more harm than good. Even when a good watering is given the water should be soft, exposed to the sun previously and warmed, and, if possible, applied at night, or in a cloudy drizzling day. We were lately favoured with an account of a young gardener being next to turned out of his place because he was deemed so thoughtless and inconsiderate as to give a good watering to a very dry flower-bed in a cloudy drizzling day. He ought, instead, to have been commended because he did think; and from thinking made his labour and the water tell in a threefold degree to what they could have done in a clear sunny atmosphere.

As water has been our chief theme, we may as well finish with it as respects the fruit and ornamental garden. For general matters we would refer to our previous gossip for a fortnight. The dry chilly nights have caused us to alter a little our treatment of watering our Strawberry plants in pots. For reasons stated above we have, until lately, watered towards evening, that the roots might get the benefit of the liquid, instead of its being quickly evaporated in the atmosphere. Whilst the chilly nights continue we will prefer watering before breakfast time, that the pots and surface soil may be drier before night, and therefore not be excessively cooled by the combined agencies of radiation and evaporation.

From the flower garden many truths may be learned as respects watering this season. We would especially direct the attention of our young readers to Mr. Robson's article last week, and also to one some time ago in the beginning of summer. We have letters complaining that though water has been used largely, the plants refuse to grow. We have others stating that Geranium-beds, that never had any water since the beginning of June, were never better. We have in previous Numbers endeavoured to explain these anomalies. For ourselves our Geraniums were never better as yet, and after they were pretty well established, they have had no water to speak of since the beginning of June, except two showers, which just cleaned the foliage and swelled the stems. Calceolarias and Verbenas are suffering, and, we believe, even they would not have suffered much had we been able to mulch them more. Verbenas and Dahlias we have been obliged to leave to their fate. Calceolarias, even yet, with no water are very fair. The one that has suffered most, not as to killing it, but as giving us a narrow line of creamy yellow instead of a mass some 18 inches wide, is the

amplexicaulis. In a damp dripping season, it would have been magnificent. As it is, it has given us a line of yellow since the beginning of June. Could we foretell the seasons we might plant better, Calceolarias delighting in moist dripping summers, and Scarlet Geraniums rejoicing in such a season as this, so far as the south is concerned. We do not believe that deluging with water would have improved Scarlets on the whole. No doubt, if soft, warm, and rich, the individual trusses would be finer, but the foliage also would be larger. We observe that, owing to the dryness, the trusses are coming smaller. It is scarcely possible to have all advantages; but we may accommodate ourselves to circumstances if we cannot bend these circumstances to our will.—E. F.

COVENT GARDEN MARKET.—AUGUST 27.

Out-door produce is plentiful, except Cabbages, which the long drought and the recent frost have rendered very scarce. Apples, Pears, and Plums, are coming in in large quantities, and Peaches and Nectarines are likewise abundant, though generally not equal in size to those sent in ordinary seasons. Of Grapes and Pine Apples there is a good supply, but Oranges and Lemons are very scarce. Imports from abroad only comprise Green Gages and other Plums, and Pears, the consignments of the latter being heavy, and realising but a low figure. The principal dessert Pears now to be had are Jargonella, Bon Chrétien, Beurré d'Amanille, and Duchesse d'Angoulême, of which last only a few have as yet made their appearance. Filberts and Walnuts are beginning to arrive in large quantities.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples ½ sieve	1	0	2	0	Mulberries punnet	0	6	1	0
Apricots doz.	0	0	0	0	Nectarines doz.	2	0	6	0
Cherries lb.	0	6	1	6	Oranges 100	12	0	30	0
Currants, Red... ½ sieve	0	0	0	0	Peaches doz.	4	0	10	0
Black do.	0	0	0	0	Pears (kitchen)... bush.	0	0	0	0
Figs doz.	1	6	2	6	dessert doz.	2	0	3	0
Filberts & Nuts 100 lbs.	45	0	60	0	Pine Apples lb.	4	0	6	0
Gooseberries ... ½ sieve	0	0	0	0	Plums ½ sieve	2	0	5	0
Grapes, Hamburghs lb.	1	6	4	0	Quinces do.	0	0	0	0
Massals 3	0	6	0	0	Raspberries lb.	0	0	0	0
Lemons 100	12	0	30	0	Strawberries ... punnet	0	0	0	0
Melons each	1	6	4	0	Walnuts bush.	14	0	20	0

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes each	0	4	0	0	Leeks bunch	0	4	0	6
Asparagus bundle	0	0	0	0	Lettuce score	1	6	2	0
Beans Broad ½ sieve	2	6	0	0	Mushrooms pottle	1	0	2	0
Kidney ½ sieve	3	6	4	0	Mixed. & Cross, punnet	0	2	0	0
Beet, Red doz.	1	0	3	0	Onions bunch	0	4	0	6
Broccoli bundle	0	0	0	0	pickling quart	0	6	0	6
Brussels Sprouts ½ sieve	0	0	0	0	Parley doz. bunches	4	0	6	0
Cabbage doz.	1	0	2	0	Peas doz.	0	9	1	0
Capicums 100	3	0	5	0	Penn quart	1	0	1	3
Carrots bunch	0	5	0	8	 bushel	7	0	0	6
Caniflower doz.	3	0	6	0	Potatoes bushel	3	0	5	6
Celery bundle	1	0	2	0	Radishes doz. bunches	0	0	0	0
Cucumbers each	0	6	1	0	Rhubarb bundle	0	0	0	0
pickling doz.	1	0	3	0	Savoy doz.	0	0	0	0
Endive score	1	3	2	6	Sea-kale basket	0	0	0	0
Fennel bunch	6	3	0	0	Spinach sieve	3	0	6	0
Garlic and Shallots, lb.	0	8	0	0	Tomatoes doz.	1	0	3	0
Herbs bunch	0	3	0	0	Turnips bunch	0	4	0	6
Horseradish bundle	1	6	4	0	Vegetable Marrows doz.	2	0	3	6

TRADE CATALOGUES RECEIVED.

John Cranston, King's Acre, near Hereford.—*Descriptive Catalogue of Selected Roses.*

B. S. Williams, Paradise & Victoria Nurseries, Holloway.—*General Bulb & Fruit Tree Catalogue.*

TO CORRESPONDENTS.

We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to The Editors of the Journal of Horticulture, &c., 171, Fleet Street, London, E.C.

N.B.—Many questions must remain unanswered until next week.

BOOKS (A Constant Subscriber).—The "Fern Manual," which may be had at our office for 5s., or free by post for sixty-four postage stamps. (T. L. K.).—The "Science and Practice of Gardening," which you can have from our office by sending your address and forty postage stamps.

DATING SPECIMEN PAPERS (D. N.).—The best paper for the purpose is very thick blotting-paper, which you can obtain of any stationer.

FLOWER GARDEN PLAN (S. B.).—We think your planting would do very well. Did we make a change it would be to transpose the planting of 8, 6, and 7, 8, making 5, 6, Cineraria maritima, and 7 and 8 Stella, and altering the outside ring accordingly. The reason for this would be the having light and dark colours alternately. The main features of the group are similar to those of one given in No. 137 as existing last year at Puttbridge, only the inner circle of clumps are more curved, and there are four smaller and four larger clumps in the outside circle. We will mention the planting this year, as it may give you some hints. 17 is tall Geranium in the centre, fringed with Echemocarpus scaber; round the Geranium a fringe of white Pentstemons; then a broad band of light Heliotrope Triomphe de Liège, followed by a ring of Caphea strigillosa; then a band of Lobelia Paxtoni, and the outside like yours; round the dial a band of Cerastium tomentosum. In the first circle of eight clumps, each is centered with a tall dark Fuchsia, with Convolvulus major peeping through them; and four are filled up with scarlet Geraniums—say 1, 2, 5, 6; and four with Calceolarias—say 2, 4, 7, 8. Of the Geraniums, two are Boule de Feu, and two Stella, and the four are edged with Lady Plymouth Geranium. The four Calceolarias consist of yellow Aurantia multiflora, with a dense margin of the dark Victory. The four smaller outside beds, alternating with the four larger ones, are each centered with a Honeysuckle, and Canary Nasturtium running through it. A chain of three links is made in the centre of the bed, a larger link round the Honeysuckle, and a smaller one at each end. The links are formed of Yellow Prince of Orange Calceolarias in one line. Inside, the links are filled with dark Calceolarias, as Crimson King, Victor Emmanuel; outside, with Lobelia speciosa, and a small band of Cerastium next the grass. The large beds have a chain of three equal links along the middle, the chain formed of Bijou Geranium. The centre link is centered with a large old plant of Tom Thumb Geranium, surrounded by Prince of Orange Calceolarias. The two end links have each a white-flowering Fuchsia in the centre, and surrounded with a dense mass of Christine Geranium. Outside the Bijou chain the bed is filled with the lilac Verbena pulchella, which beautifully softens down the whole.

WARD'S CASES (H. Bagge).—We do not know any one who keeps these cases for sale. You can have the Bijou plant case of any size you like, and can obtain particulars from the maker, Mr. Stocks, Cabinet-maker, Archer Street, Notting Hill. They are precisely on the same principle as Ward's cases. The Trichomanes radicans can be grown in a glass pan covered by a well-glass quite as well as in a case.

AMARYLLIS FORMOSISSIMA (Jacobus Lily).—We are not aware that this bulbous plant has been proved hardy in this country, and we do not recollect the statement by Mr. Beaton as to its hardiness. It might do planted out in the open borders in April, and would no doubt flower in May or June if the flower-scape had been formed in the previous year; but it is very questionable whether the heat of our short summer would be sufficient to induce and mature a strong growth, so as to keep the plants year after year in a blooming state. It is certainly worth a trial, but we have no experience on the subject. Deep planting of bulbs may protect them from frost, but we do not recommend such treatment, and the Amaryllis family are the last that we should try it with.

CULTURE OF PLANTS (Ignotus).—Only the treatment of eight plants asked for at once, any one of which if fully described would occupy at least one page! Bougainvillea splendens requires a stove temperature when growing, with that of a greenhouse when at rest, and a dry state of the soil, which should be turfy loam one-half, turfy peat or leaf mould half, with a liberal admixture of sand. Medinilla magnifica, a stove plant, requires a compost of turfy sandy peat two-thirds, turfy loam one-third, with a free admixture of silver sand. It blooms in May or June, and should then be repotted and cut back if necessary, but both operations should not be performed at the same time. Cut back after flowering, and pot when the shoots have pushed an inch or two. Campylobotrys refugens needs a warm close stove, a compost of sandy turfy peat with a little loam and sand, abundant drainage, and slight watering, with a moist atmosphere, but no syringing overhead. Hibiscus Cooperi; soil, loam two-thirds, leaf mould one-third, with a little sand incorporated with it, and the temperature of a stove. Eriocnema marmorea, the same treatment as for Campylobotrys. Cissus porphyrophylla, a stove climber, requires slight shade, abundant space, and a soil composed of peat two-thirds, loam one-third, with a little sand. Miconia pulverulenta, a new plant, succeeds in a compost of peat and turfy loam in equal parts, with about one-sixth of sand added. It, too, is a stove plant, and a fine one, impatient, as all plants with fine foliage are, of much syringing. Aglaonema commutatum, is another of the fine-foliated plants that are all the rage just now. It is a stove plant, requiring a compost of turfy peat two-thirds, loam one-third, with a free admixture of sand, abundant drainage, a moist atmosphere, and copious waterings when growing vigorously, but about half the quantity at other times.

SEEDLING ROSE (J. Cranston).—We regret that we did not see your Rose "King's Acre" in the season, for when such beautiful flowers are produced now, after such a drought, we may well ask what must it have been then? Those you sent were very fine, globular, and of a colour much wanted—purplish rose, with the reverse of the petals light. It is a really fine flower; and if, as you say, vigorous, having withstood the season of 1880 as a seedling, it will be a valuable acquisition to our English-raised Roses.

IVY DETACHED FROM A WALL (Old Deer).—We advise you to try and fasten the Ivy to the wall with iron holdfasts, and if this can be done without breaking the main branches it may be allowed to remain over the winter, and then be cut in the April of the following year; but if that be impracticable we think you would do well to cut away all the stubborn branches that cannot be fastened to the wall, and to train in the weaker or smaller ones. We should do it forthwith on the score of neatness; but if you do not mind the appearance you may train the small branches to the wall now, and defer cutting away those which are strong until March, when, on their removal, a large amount of nutriment will be thrown into the small branches, which will cause them to become exceedingly vigorous in the following summer.

VINE SHOOTS DISEASED (G. H. T.).—We never saw any so badly galled. The roots we think must have descended into an ungalnated soil. If so, the only remedy will be to lift them to within 18 inches of the surface, and to tempt them to remain there by keeping the surface mulched in summer with long stable manure. The Fern you enclosed is Nephrolepis pectinata.

MARK OF INSECT (J. W. Anfield).—The insect was too crushed to be certain, but we think it is only what is usually called "the Harvest Bug."

FUCHSIA FLOWER-BUDS FALLING (*A Lincoln Lady*).—We think the buds fall owing to the dryness of the atmosphere and defective root-action. Perhaps you have the pots standing in saucers, and the plants are thus deluged with water, causing the young fibres to rot, and it being these that feed the buds. The latter fall for lack of nourishment. Placing the plants out of doors at night will conduce to their healthy growth; but we think that alternate changes of cold and heat are not proper for a plant in a flowering state. The extreme dryness of the room, and the sudden change to the open air, are a probable cause of the falling of the buds. The plants cannot be too near the glass, but with the hot weather we have had recently it is likely that the evaporation from the leaves would be more than the supply from the roots, and the buds would then fall. The falling may have been caused by a dry state of soil, even if but for a few hours, or by the want of fresh air. The remedy will be the opposite course of treatment. (*A Perplexed Subscriber*).—From your description of the treatment there is nothing, so far as we can discover, that could affect their blooming, except it be an insufficiency of water at the root. Water every two days is too little. Ours have required watering at least once a day, and even that has been scarcely sufficient to keep them from flagging. Too much or too little water are equally injurious, and not less so is a dry atmosphere accompanied by a high temperature, and insufficient ventilation. You may enjoy the luxury of eating Grapes of your own growing by planting a couple of vines if the tree on the south-west does not overshadow the house too much. You will not have room for more than two, and these we would have Black Hamburgh; but if you wish for a White Grape, a Blackhand Sweetwater may be substituted for one of the Hamburghs. In addition to the Vines, you may have a few plants, as Fuchsias, Geraniums, Primulas, Cinerarias, bulbs, and other greenhouse plants which may be placed outdoors in summer, and the house kept gay with Balsams, Celosias, Amaranthus, and a few Achimenes and Gloxinias.

COMMENCEING A MARKET GARDEN (*L. E.*).—We fear we cannot conscientiously advise you to embark extensively in market gardening without more experience than you probably possess. If, therefore, your field be a meadow let it remain so until you can see more. You will easily find a tenant for it; and if you were to spend a year amongst the market gardens around London, you would obtain more knowledge of the subject than you could from a whole number of our periodicals, that is if you kept a sharp look out and noted everything that was going on around you. If you were determined to start at once, we would say, begin with part of your land, say one acre, which is sufficient if you crop it with a variety of vegetables, and do all the work yourself. If you determine on this commence at once, and trench a part of it to plant with Cabbages for early spring use. The plants you must buy from some one having a good early sort, as the *Field Market*, *Fulham*, or *Dowdham*. During the autumn and winter you might keep on trenching, and early in spring various crops might be put in, as to which we will give you advice in future numbers. You must bear in mind that you will have nothing to sell until the end of April or May, when your Cabbages will be ready for market. During the autumn many crops may be got in, as patches of herbs, if they be wanted. Current, Gooseberry, and other fruit trees may be planted, and in the spring Apples, as also Sea-kale and Globe Artichokes, if you intend to cultivate them. We would strongly advise you to find out the wants of the district you live in, and only plant what is likely to sell; of course, when you can see a prospect of a demand for another article then by all means produce it, and be sure and grow everything well, so as to acquire a good name at first, and then we have no doubt you will succeed.

EVERGREENS ON CHALK SOIL (*A Constant Reader*).—Besides the Yew and Box which you mention, we have planted, and found to flourish, on a similar soil near Winchester—*Laurostema*, all the evergreen *Berberis*, *Portugal Laurel*, *Evergreen Oak*, and *Taxodium sempervirens*. The common *Laurel* and *Rhododendrons* will not succeed.

RED SPIDER ON FUCHSIA (*J. E.*).—Take the plants out of the house or the insects will proceed to the other plants. Syringe them with Gishurst compound according to the directions given on the packet, and repeat the application until the insects cease to appear. Keep the air in the greenhouse more moist by watering the path.

NAMES OF PLANTS (*L. E.*).—We cannot undertake to name plants from single leaves. Your tree may be any one of some half-dozen or more with similar leaves that we know. (*Conway*).—*Linaria vulgaris*. (*A Subscriber, Hertf.*).—1, *Bromus meoetachyus*; 2, unnameable; 3, *Briza maxima*; 4, *Berardus jubatum*; 5, *Pennisetum villosum*. (*D.*, *Budleigh Salterton*).—Your plant is rightly named. It flowers in winter, when the branches are naked, and is a very acceptable addition to our few indigenous winter flowers. (*E. F.*).—*Ophthalma quinqueloba*. (*Constant Reader*).—*Gaultheria Shallon*.

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

THE AGRICULTURAL HALL POULTRY SHOW AND THE POULTRY CLUB.

MR. TUDMAN in reply to my last communication declined to answer publicly any queries put to him, but promised all the information he could give to parties communicating directly with him. Mr. Manning states that he "wrote to Mr. Tudman, asking him for the rules and regulations of the Poultry Club, with the view of becoming a member," and that the answer he received was "to the effect that the rules and regulations were available to members only." The answers to his other inquiries appear also to have been as little satisfactory, as he seems to have relinquished all ideas of membership.

A similar incident occurred to me some time since. The Club had advertised their rules to non-members at 5s. per copy, and I ordered a copy, enclosing a money order for the amount. The rules were, however, notwithstanding refused,

and the money order returned. Mr. Hughes naively suggests that parties desiring to have information may obtain it by paying their half guinea and becoming members, which will also put them in possession of the rules; but this savours so much of the showman, that it is difficult to believe the suggestion to have been seriously made, especially, too, as another correspondent, who wrote to Mr. Tudman, states that from his reply it appeared to him doubtful if they desired any more members.

This, however, is not all. Another correspondent, "*A Poultry Fancier*," gravely assures your readers that the rules have not yet been fully compiled, and that they are nevertheless undergoing revision. This would indicate the whole affair to be a new version of the "mountain in labour," in that, after all the pangs of parturition, it has not even given birth to the "*ridiculus mus*."

But, seriously, who can have confidence in a club under such management? Here is a code of rules promised which were to reduce poultry judging to the precision of a mathematical problem—next they are advertised for sale, but refused to persons applying for them—then the public are informed that they are to be obtained only by those who become members; and lastly, that they are not yet wholly compiled, and are nevertheless undergoing revision! And, to render the state of things more anomalous, with some rules and regulations which appeared in another Journal, Rule 10 states "that the code of rules for the guidance of judges, when made, to be published;" whilst Rule 13 requires "the judges to judge according to the rules drawn up for their guidance." So we are on the eve of a show to be held under the auspices of the Club, where the prizes are to be awarded according to rules not yet compiled. I am aware that this has been virtually denied, and that it has been asserted that the "members of the Poultry Club are not responsible for the prize lists or the getting up of shows." If this is the case the wider it is known the better, that exhibitors may not be misled by the attractive heading of the forthcoming Islington Show—"Under the patronage and management of the Poultry Club."

It is also generally understood that the Islington Committee, when applied to, declined to undertake the responsibility of the Show, having lost £400 by a previous one, and that a few of the Stewards of the Club entered into a guarantee to secure the Committee from loss.

It is time, too, that the public should know who are to be the judges; but this is another of those vexed questions, which appear to have made the confusion of affairs worse confounded. First we are informed that Mr. Hewitt is appointed; but this is now denied, notwithstanding the admission of Mr. Tudman in his letter which appeared in your impression of the 12th of July, in which he says, "Wishing to secure the services of such an upright Judge as Mr. Hewitt, I was anxious to make any sacrifice to meet his views, and the offer to waive the rules was merely a tribute to the great ability and acknowledged experience of the greatest poultry Judge in the world." In his letter to Mr. Hewitt, he says, "All I now simply ask is, Will you act as Judge for us? A large show is about to take place under the management of the Poultry Club, and we trust you will give us the benefit of your acknowledged ability." If this does not amount to an admission of Mr. Hewitt having been engaged it is difficult to find terms more express. But here is the rub—the rules, which form the backbone of the scheme, had to be relinquished ere the services of this distinguished Judge could be secured; and if Mr. Hewitt is not still under engagement, it is through the publicity of this correspondence. Nor are there any judges yet engaged, notwithstanding the contrary has been stated. Messrs. Challoner and Teesbay may have been selected, but they are not yet engaged.

Under all those conflicting circumstances the prospects of the impending show (and indeed of any future show under the patronage of the Club), are anything but satisfactory; and what security can exhibitors feel under an Association which, under such circumstances, holds itself irresponsible? With all the secrecy and mystery surrounding its doings, what guarantee have exhibitors that there may not be "earwiggling" going on within its circle? That there may be "earwiggling" elsewhere, as Mr. Tudman complains, is not to be wondered at under the circumstances. Mr. Tudman may have in his own estimation chosen the better part of

valour, but if he wishes the Club to succeed it must be by different measures than those hitherto adopted.—AN EXHIBITOR.

Your correspondent Mr. Thomas Hughes, a member of the Poultry Club, objects to non-members of the Club being supplied with rules for which he has "had to pay."

He says, surely I "could afford half a guinea," and have had all the information I desired. I do not understand Mr. Hughes. If he means that the rules of the Poultry Club form a little book for which he has had to pay half a guinea, I must tell him I think it is very dear. If he intends to say that any person becomes a member of the Poultry Club who has had to pay half a guinea, I will tell him that this is very cheap, and that therefore I cannot possibly afford to become a member.

I will not judge the Club by the letter of one of its members, but I will wait for the promised information which is to appear in one of the public prints, and then see if I can afford half a guinea.—GEORGE MANNING.

CRAMP IN CHICKENS.

I SHOULD be much obliged if you would explain the cause and prescribe the treatment of a disease by which I have lost several prize *Hamburgh* chickens this season. The disease first attacks the wings, which become disordered as if from fighting. In three or four days they drop, sometimes one, sometimes both, in such a manner as to impede walking. Then the feet become cramped, and the toes drawn up together as if the sinews of the legs contracted. This rapidly grows worse, and in the course of eight or ten days from the commencement of the attack, the fowl is on its back and quite helpless, and in two or three days more dies. The appetite is good to the last, and in all other respects the fowls appear perfectly healthy. The disease appears when the chickens are about four months old.—RHEUMATISM.

[Your *Hamburgh* chickens suffer from cramp and die of it. We should expect to find your poultry-house with a stone, brick, or boarded floor—either would cause it. Should such be the case, remove it, or if you object greatly to that, cover it 6 inches deep with dry gravel. It is, however, better to remove it. If this is not the cause, you will find it is some damp spot or place they use, or else poor or insufficient food. Get some ground oats, feed on them morning and midday, and in the evening give bread and ale. This will only be necessary while they are sickly. See that they roost in a dry place.]

SULTAN FOWLS.

I NOTICE in your reply to your correspondent "IGNORAMUS" that you express a doubt as to the existence of *Sultans* as a pure breed. For the information of your subscriber I write to say that the original imported pen was sold to a gentleman and well-known breeder in Yorkshire, whose entire stock I recently purchased, including the first, second, and third generations from the imported pen, and I trust at some of the forthcoming chicken shows to vindicate the existence of this beautiful breed in its purity.—F. W. ZURHORST.

ROCHDALE EXHIBITION OF POULTRY.

THIS Exhibition was held on the 24th inst., and, undoubtedly, the grounds of A. H. Rhoyds, Esq. afford one of the most beautiful of sites for the purposes of such a Society. The weather, too, was of the brightest character, and the Show was numerously attended by those near at hand; we also observed on the ground a considerable number of gentry from rather distant localities. The efforts of the Committee to display the poultry to the best possible advantage were admitted by every one; and the entries being considerable as to numbers, the only drawback arose from the generality of the specimens exhibited being in the very midst of moult, so that particular details of the birds in their present condition would be unadvisable, even were the attempt carried out. Suffice it to say that, as will be seen

by reference to the prize list, a great majority of our principal poultry-breeders were represented by specimens that in a month or six weeks hence will most probably be in as perfect feather as could be desired. We cannot help, however, calling attention this year to the great deficiency of really early-hatched chickens.

SPANISH.—First, Miss E. Beldon, Bradford. Second, S. Handley, Darlington Cottage, Pendleton. Commended, S. Haslam, Belfield, near Rochdale. *Chickens.*—First, S. Robson, South Milford. Second, J. Stott, Healey, near Rochdale.

COCHIN-CHINA.—First, E. Smith, Middleton. Second, Miss E. Beldon, Bradford. *Chickens.*—First, Captain H. Heaton, Lower Broughton. Second, G. Wheeler, Middleton. Commended, Miss E. Beldon.

HAMBURGH (Golden-spangled).—First, W. Travis, Little Moss, Ashton-under-Lyne. Second, Miss E. Beldon. Commended, J. Andrews, Waterhouse, Ashton. *Chickens.*—First, J. Roe, Hadfield, near Manchester. Second, F. Greenwood, Rochdale.

HAMBURGH (Silver-spangled).—First, Miss E. Beldon, Bradford. Second, J. Andrews, Waterhouse, Ashton. *Chickens.*—First, Miss E. Beldon. Second, E. Collinge, Boarshaw Clough, Middleton. Commended, E. Kay, Middleton; J. Fielding, Newshurch.

HAMBURGH (Black).—First, C. W. Brierley, Rhodes House, Middleton. Second, Miss E. Beldon, Bradford. *Chickens.*—First, R. Battersby, Heywood. Second, J. Andrews, Waterhouse, Ashton.

HAMBURGH (Golden-pencilled).—First and Second, S. Smith, Northowram, near Halifax. *Chickens.*—First, J. Fielding, Newshurch, Romedale. Second, T. Wrigley, Jun, Tonge, Middleton. Highly Commended, W. Kershaw, Heywood. Commended, J. Turner, Stand Lane, Radcliffe.

HAMBURGH (Silver-pencilled).—First, Miss E. Beldon, Bradford. Second, C. Boyds, Green Hill, Rochdale. *Chickens.*—First, Miss E. Beldon. Second, J. Platt, Dean, near Bolton. Highly Commended, W. Yates, Unsworth, Bury; J. Sheppard, Ridings, near Rochdale.

POLAND.—First, Miss E. Beldon, Bradford. Second, W. R. Duxbury, Primrose Road, Leeds. *Chickens.*—First, Miss E. Beldon.

BRAHMA FOOT.—First, E. Leech, Greave, Rochdale. Second, H. Lacy, Hebdon Bridge. *Chickens.*—First, T. Statter, Stand, Manchester. Second, H. Lacy.

DORKING.—First, T. Statter, Stand, Manchester. Second, E. Smith, Middleton. *Chickens.*—First, E. Smith, Middleton. Second, T. Statter.

GAME (Any colour).—First, T. Statter, Stand, Manchester. Second, C. W. Brierley, Rhodes House, Middleton. *Chickens.*—First, S. Cryer, Longclough, Littleborough. Second, J. Turner, Stand Lane, Radcliffe. Highly Commended, F. Bright, Cronkeyshaw, Rochdale; R. Rawstron, North Terrace.

ANY VARIETY.—First, W. Fairburn, Wardle, near Rochdale. Second, Mrs. Croxley, Underwood Yard, Bury Road. Commended, R. Leech, Jun., Greave, Rochdale.

GAME COCK.—First, Miss E. Beldon, Bradford. Second, T. Statter, Stand Hill. Highly Commended, J. Turner, Rochdale; C. W. Brierley, Rhodes House, Middleton.

BANTAM (Any variety).—First, J. W. Morris, Rochdale. Second, Miss E. Beldon. Highly Commended, C. Walker, Bradford.

GREY.—First, W. Kershaw, Heywood. Second, E. Leech, Greave, Rochdale. Highly Commended, W. R. Duxbury, Primrose Road, Leeds.

DUCKS (Aylesbury).—First and Second, E. Leech, Greave, Rochdale.

DUCKS (Rouen).—First and Second, T. Statter, Stand, Manchester. Commended, E. Leech, Greave, Rochdale.

TURKEYS.—First, C. W. Brierley, Rhodes House, Middleton. Second, E. Leech, Greave, Rochdale.

The Judges were Mr. Thomas Chaloner, of Worksop, near Chesterfield; and Mr. Edward Hewitt, of Sparkbrook, near Birmingham.

COTTINGHAM POULTRY SHOW.

THE annual Show of Poultry and Pigeons was held on the 17th instant, and many excellent specimens were shown in almost all the classes. Subjoined is the best prize list we could obtain, as unfortunately there were no printed catalogues, and it was no easy matter for the reporters to get a correct list.

SPANISH.—First, W. Cannan, Bradford. Second, S. Robson, Brotherton. *Chickens.*—First, A. Holmes, Horham. Second, G. Robson, Hull.

DORKING.—First, F. Key, Beverley. Second, W. Watson, Bishop Burton. *Chickens.*—First and Second, W. Watson.

COCHINS.—First, E. C. Protter, Sutton. Second, R. Loft, Woodmansey.

GAME (Black-breasted and other Reds).—First and Second, H. Adams, Beverley. *Chickens.*—First, H. Adams. Second, R. Burgess.

GAME (Any other variety).—First, H. Adams. Second, R. Robson, Beverley. *Chickens.*—First, J. Hodgkinson, Hull. Second, H. Adams.

POLAND.—First, W. Cannan. Second, J. Stephenson, Preston. *Chickens.*—First, J. M. Procter, Hull. Second, W. Cannan.

HAMBURGH (Golden-spangled).—First, G. Holmes, Driffield. Second, S. Camping, Cottingham. *Chickens.*—First, G. Holmes. Second, W. Cannan.

HAMBURGH (Silver-spangled).—First, S. Camping. Second, W. Cannan.

HAMBURGH (Golden-pencilled).—First, S. Camping. Second, W. Cannan.

Chickens.—First, W. Cannan. Second, J. Bilton. *Chickens.*—First, W. Cannan. Second, J. Bilton, Cottingham.

HAMBURGH (Silver-pencilled).—First, W. Cannan. Second, J. Bilton. *Chickens.*—First, J. Bilton.

BANTAMS (Gold-laced).—First, J. R. Jessop, Hull. Second, R. M. Stark, Hull. *Chickens.*—First, R. M. Stark.

BANTAMS (Silver-laced).—First, W. Cannan.

BANTAMS (Game).—First, R. M. Stark. Second, G. Holmes.

BANTAMS (Any other variety).—First, W. Cannan (Black). Second, R. M. Stark (Silver-laced). *Chickens.*—First, J. Gawan. Second, J. Brittain.

ANY OTHER DISTINCT VARIETY.—First, R. Loft. Second, W. Cannan.
Chickens.—First, O. A. Young, Driffield. Second, J. Pares, Chartsey.
FARMYARD CROSS.—First, T. Coverdale. Second, R. Loft. *Chickens*.—
 First and Second, G. Bromley, Cottingham.
SELLING CLASS.—First, H. Burstall, Nottingham. Second, G. Bromley.
PRA FOWLS.—First, J. Ringrose, Cottingham. Second, B. Haworth, Hull
 Bank House.
GUINEA FOWLS.—First and Second, O. A. Young.
TURKEYS.—First, W. Cannan. Second, W. Wallace.
GERSE.—First, O. A. Young. Second, Mrs. Nicholson.
DUCKS (Aylesbury).—First, O. A. Young. Second, T. C. Trotter.
DUCKS (Rouen).—First and Second, O. A. Young.
DUCKS (Any other variety).—First and Second, J. R. Jessop (East Indian
 and Wild).
PIGEONS.—*Croppers*.—First, S. Robson. Second, W. Watson, Beverley.
Carriers.—First, G. Robson. Second, H. Yardley, Birmingham. *Turbits*.
 —First, H. Yardley. Second, J. R. Jessop. *Trumpeters*.—First, F. Key.
 Second, W. B. Van Haansbergen, Newcastle. *Jacobins*.—First, J. W. Edge,
 Birmingham. Second, T. Ellington, Woodmansey. *Fantails*.—First, T.
 Ellington. Second, J. R. Jessop. *Dragons*.—First, W. Watson. Second,
 T. Statters, Hull. *Tumblers*.—First, W. B. Van Haansbergen. Second,
 W. Watson. *Barbs*.—First, W. B. Van Haansbergen. Second, H. Yardley.
Nuns.—First, F. Key. Second, W. Watson. *Any other variety*.—First,
 S. Robson (Runts). Second, G. Robson (Spots). *Tumblers* (Blue Baldpate).
 —Extra Prize (Given by Mr. W. A. Summers), J. W. Edge. The liberal
 prizes offered by this gentleman for Nuns with the usual colours reversed
 failed to bring a single entry, and neither Red-headed nor Yellow-headed
 Nuns put in an appearance, although we understand the two latter are to be
 seen in the neighbourhood.

F. Ferguson, Esq., was the Judge.

TONG POULTRY SHOW.

THE fourth annual Exhibition of the Tong Poultry Society
 took place at Dudley Hill, on the 16th inst. The entries
 were much more numerous than in previous years, and the
 poultry throughout were very good, and so were the Pigeons.

The following is the prize list:—

SPANISH (Black).—First and Second, Miss E. Beldon, Gilestead.
DORKINGS.—First and Second, Miss E. Beldon.
COCHIN-CHINA.—First and Second, Miss E. Beldon.
GAME.—Prize, T. Suddirk, Tong Street.
HAMBURGH (Black).—Prize, Miss E. Beldon.
HAMBURGH (Golden-spangled).—First, J. Greenwood, Cutler Heights.
 Second, Miss E. Beldon.
HAMBURGH (Silver-spangled).—First and Second, Miss E. Beldon.
HAMBURGH (Golden-pencilled).—First and Second, Miss E. Beldon. Highly
 Commended, J. Gans. Commended, J. Greenwood.
HAMBURGH (Silver-pencilled).—First and Second, Miss E. Beldon. Highly
 Commended, H. Firth, Tong Street.
POLAND.—First and Second, Miss E. Beldon.
BANTAMS (Game).—First, Miss E. Beldon. Second, H. Firth.
BANTAMS (Any other variety).—First and Second, Miss E. Beldon. Highly
 Commended and Commended, S. Rhodes.
SINGLE COCK (Any variety).—First, Miss E. Beldon (Cochin). Second,
 T. Suddirk (Game).
DUCKS (Rouen).—Prize, Miss E. Beldon.
DUCKS (Aylesbury).—First, J. Blackburn. Second, C. Holmes.
GERSE.—First and Second, G. Yates, Holm Lane.
PIGEONS.—*Pouters*.—Prize, Miss E. Beldon. *Carriers*.—Prize, Miss E.
 Beldon. *Trumpeters*.—Prize, Miss E. Beldon. *Owls*.—First, Miss E.
 Beldon. Second, A. Field, Dudley Hill. *Barbs*.—Prize, Miss E. Beldon.
Jacobins.—Prize, Miss E. Beldon. *Tumblers*.—First, Miss E. Beldon.
 Second, A. Field. *Tumblers* (Almond).—Prize and Commended, A. Field.
Antwerps.—First and Second, A. Field. Highly Commended, A. Field.

The Judges were Mr. E. Hutton, Pudsey, Leeds; and
 Mr. L. Bedom, Gillington, Bradford.

SCARBOROUGH AND HACKNESS AGRICULTURAL SOCIETY'S POULTRY SHOW.

THE Poultry Show in connection with this Society took
 place on the 19th inst., and the Scarborough Song Bird
 Society's Exhibition was held at the same time.

The following is a list of the prizes awarded:—

SPANISH.—First, W. Cannan, Bradford. Second, W. K. Duxbury, Leeds.
Chickens.—Prize, W. Cannan.
DORKING.—First, J. Key, Leeds. Second, O. A. Young, Driffield.
Chickens.—Prize, J. Key, Beverley.
COCHIN-CHINA.—First, T. H. Barker, Hovingham. Second, O. A. Young,
 Driffield. *Chickens*.—Prize, T. H. Barker. Highly Commended, W.
 Cannan, Bradford.
GAME.—First, R. Hardy, Ruston. Second, G. Cartwright, Seamer Lane.
Chickens.—Prize, R. Hardy.
HAMBURGH (Golden-spangled).—First, Mrs. T. Darrel, Aytton. Second,
 J. Atkinson, East Aytton. Highly Commended, R. Smith, Norton, Malton.
HAMBURGH (Silver-spangled).—First, W. Cannan, Bradford. Second, J.
 Atkinson, East Aytton.
HAMBURGH (Golden-pencilled).—First, A. Hwa, Burniston. Second, W.
 Cannan, Bradford. Highly Commended, O. A. Young, Driffield.
HAMBURGH (Silver-pencilled).—First, J. Bliton, Cottingham. Second,
 W. Cannan, Bradford.
POLAND.—First, W. Cannan, Bradford. Second, W. K. Duxbury, Leeds.
 Highly Commended, Messrs. Haynes & Hough, Bedale.
 ANY DISTINCT BREED NOT PREVIOUSLY MENTIONED.—First, O. A. Young,
 Driffield. Second, W. Cannan, Bradford. *Chickens*.—First, W. Cannan,
 Bradford. Highly Commended, R. E. Turnbull, Hackness.

BANTAMS (Black or White).—First, R. Smith, Norton, Malton. Second,
 Lady Lonsborough.

BANTAMS (Neither Black nor White).—First, G. Holmes, Driffield.

Second, W. Cannan, Bradford. Highly Commended, O. A. Young.

GERSE.—First, O. A. Young, Driffield. Second, W. Duxbury, Leeds.

Goslings.—Prize, Mrs. Hopper, Wykeham, Grange.

DUCKS (Aylesbury).—Prize, O. A. Young, Driffield. *Ducklings*.—Prize,

Mrs. G. P. Dale, Scarborough.

DUCKS (Rouen or any other Breed not Aylesbury).—First, T. H. Barker,

Hovingham. Second, J. Brain, Pickering. *Ducklings*.—Prize, Mrs. J.

Darrell, Aytton.

TURKEYS.—Prize, W. Cannan, Bradford. *Poulters*.—Prize, O. A. Young,

Driffield.

GUINEA FOWL.—First, O. A. Young, Driffield. Second, J. Riby, Ruston.

PIGEONS.—*Croppers*.—Prize, J. R. Trennan, Helmsley. *Carriers*.—Prize,

J. Dotchen, Whitby. *Trumpeters*.—Prize, J. Key, Beverley. *Fantails*.—

Prize, R. Eah, Helperthorpe. *Tumblers*.—Prize, J. Dotchen, Whitby.

Barbs.—Prize, J. Dotchen, Whitby. *Any other Variety*.—Prize, J. Hodg-

son. *Ornamental Waterfowl*.—Prize, Mrs. G. P. Dale Scarborough.

RABBITS (Any Breed).—Prize, W. Holmes, Driffield. Highly Commended,

J. Grimshaw, Bridlington.

SONG BIRDS.—*Canary* (Half-bred).—First, R. Cross, New Queen Street.

Second, J. Oxley, Alma Parade. *Canary* (Common).—First, W. Bean,

William Street. Second, R. Cross. *Canary* (Marked).—First, R. Cross.

Second, J. Ralnton, Dumble Street. *Canary* (Created).—First, J. Ralnton.

Second, J. Oxley. *Canary* (Cinnamon).—Prize, J. Oxley. *Lizard* (Golden

or Silver-spangled).—Prize, J. Oxley. *Mule* (Marked).—Prize, W. Bean.

Mule (Orange).—Prize, R. Cross. *Best Cage of Birds*.—First, R. Cross.

Second, J. Oxley.

SWEEPSTAKES.—*Canary* (Yellow Belgian).—First, W. Hogg. Second, W.

Jefferson, Knappton Station. *Canary* (Buff Belgian).—Prize, W. Hogg.

Canary (Half-bred).—Prize, W. Jefferson. *Canary* (Buff Half-bred).—

First, W. Hogg. Second, J. Towell, St. Sepulchre Street. *Canary* (Yellow

Norwich).—First, C. Yeoman, Long Westgate. Second, S. Smith, Falconer

Square. *Canary* (Common Yellow).—First, W. Jefferson. Second, E. S.

Midgley, South Cliff. *Canary* (Common Buff).—First, W. Jefferson. Second,

E. S. Midgley. *Canary* (Marked).—Prize, C. Leader, St. Thomas Street.

Mule (Marked).—First, W. Hogg. Second, W. Jefferson. *Mule* (Orange).

—First, W. Wood, St. Nicholas Street. Second, J. Hattersley, Seamer

Lane. *Parrot*.—First, R. Oxley. Second, D. Wright.

The Judges for Poultry were Mr. George S. Simpson,

North Burton; and Mr. Richard Nesfield, Snainton.

OWSTON, ISLE OF AXHOLME, POULTRY SHOW.

THE Owston Poultry Association celebrated its anniver-
 sary on the 10th inst., and notwithstanding numerous draw-
 backs the Society continues to increase in usefulness and
 prosperity. The Judge, Mr. J. Hodgkinson, of Hull, who has
 officiated at this Show previously more than once, spoke
 highly of the improvement to be noticed in the several classes
 exhibited; and to show that his efforts had been appreciated
 elsewhere, he was, on the preceding evening, presented with
 a valuable gold watch and chain by the Cottingham Floral,
 Horticultural, and Poultry Association. He pronounced this
 show of poultry, &c., an excellent one, particularly noticing
 three pens of chickens shown by Mr. F. Sales, of Crowle—viz.,
 Brown Red, Black Red, and Grey Game, and awarded each
 pen a prize as extra stock. Several specimens of English
 and foreign birds shown by Mr. G. E. Addey, of Epworth,
 elicited great admiration, and were awarded a premium.
 Although the number of pens was not so great the quality
 of the birds was superior to former exhibitions, and evinced
 the care in the breeding.

The following is a list of the awards:—

DORKINGS.—Prize, F. Sales.
POLANDS.—Prize, F. Sales.
GAME.—Prize, F. Sales.
BANTAMS.—Prize, W. Benson, Clarbrough.
HAMBURGH.—Prize, B. Barrow, Ferry.
TURKEYS.—Prize, F. Sales, Crowle.
GERSE.—Prize, Mrs. Dixon, Mellwood.
DUCKS.—Prize, — Bealley, Kelfield.
GUINEA FOWLS.—Prize, F. Sales, Crowle.

DOMINIQUE FOWLS.

NOT being a regular reader of the Journal I am not aware
 whether you have given any account of the Dominique fowl
 previous to that published in the Number for July 12th, and
 I therefore send an extract from the *American Agriculturist*,
 containing an account of that variety.—F. H.

"This well-known and much-neglected common fowl is
 supposed to be an old and distinct variety, though usually
 looked upon as a mere farmyard fowl—that is, the accidental
 result of promiscuous crossing; but there are several forms
 among the barn-yard fowls, so called, that are seen to be
 repeated generation after generation, the counterparts of
 which are met with scattered here and there all over the

country. The Dominiques are distinguished by their markings and their colour, which is generally considered an indication of hardihood and fecundity. By some they are called 'Hawk-coloured fowls,' from their strong resemblance in colour to the birds of that name. In England they are usually called 'Cuckoo fowls,' from the fancied resemblance of their plumage to the feathers of the Cuckoo's breast.

"The prevailing and true colour of the Dominique fowl is a lightish ground, barred crosswise, and softly shaded with a dark slaty blue. The combs vary, some being single, while others are double—most, however, are single. Feet and legs light flesh colour and yellow; bill the same as that of the legs.

"The merits of this breed recommend them to persons residing in the country, as well worthy of promotion in the poultry-yard. Whether as makers of eggs, or of meat, as sitters, or as nurses, they are valuable. We seldom see bad fowls of this variety; and, take them all in all, the writer does not hesitate in pronouncing them one of the best and most profitable, being hardy, good layers of more than medium-sized eggs, steady sitters, careful nurses; and, what is very important, the chicks are hardy, feather early, and are easy to rear. It is a perfect vexation to try to raise chicks of some of the more tender varieties, for they are continually drooping and dying. The Dominiques afford excellent quality of eggs, and flesh of a juicy, high-flavoured character—in the latter quality little inferior to the Dorking. —C. N. BEMENT."

[From this description we infer that the Dominique is only a Cuckoo Dorking, probably without the characteristic Dorking claw.]

A KNOTTY QUESTION.

At the Woodbridge County Court, on the 15th inst., an action was brought by H. Payne, of Stowmarket, solicitor's clerk, against John Dallenger and Frederick Whistock, Secretaries of the Suffolk Poultry Society, Woodbridge, to recover the sum of 8s., under the following circumstances:—The defendants were the Secretaries of the Suffolk Poultry Society. On the 7th of May, 1864, the plaintiff entered a Dorking cockerel to be exhibited in a sweepstakes at a Show to be held at Woodbridge on the 26th and 27th of May, 1864, and paid to the defendants an entrance fee of 7s. 6d. No other entry was made for the sweepstakes, and the defendants neglected to inform the plaintiff thereof, whereby he incurred an expense of 3s. for carriage in sending his (plaintiff's) cockerel to and from the said Show; and the defendants retained 5s., part of the entrance fee. The plaintiff contended that one entry did not constitute a sweepstakes, and that, therefore, the defendants ought to have written to him, stating that fact. Mr. Dallenger, one of the defendants, pleaded the rules of the Society and the form of the entry paper as signed by the defendant, contending that the entry of the bird was for exhibition, not competition only, subject to the rules and regulations of the Society; that he was not bound to inform the plaintiff that there was only one entry, but that if he had done so he would have been guilty of a breach of trust, his duty being to take care of the interests of the Society. He contended that, under Rule 10, persons entering poultry, and failing to send it, forfeit the entry fees, and that they were entitled by the sweepstakes rule to deduct 5s. from the entry. His Honour said he saw no rule requiring the Secretaries to inform exhibitors when there was only one entry, and eventually deferred his judgment till the next court. —(Essex Gazette.)

PIGEONS AT NEWCASTLE-UPON-TYNE AND DARLINGTON SHOWS.

It appears from Mr. Shorthose's letter in your impression of last week, explanatory of his appointment of the Pigeon Judge at Newcastle-upon-Tyne, he concluded, "That if Mr. Botcherby was competent to judge at an important Show like that at Darlington," he could not do wrong in obtaining Mr. Botcherby's services, although as to his competency for such a task he "knew but little."

Doubtless, Mr. Shorthose did his best under the circum-

stances, but it is the misfortune of exhibitors that so little was known, and so little cared for the mistake in the Darlington appointment, thus entailing a like dissatisfaction at Newcastle.

With respect to the reversal of the prize cards in one class, perhaps Mr. Shorthose will state whether such reversal actually took place or not? If altered, it must have been by some one in authority, and it matters not by whom, the fact remains the same.

Your correspondent "J. I. D.," by jumping at conclusions, for reasons apparent enough, makes the discovery from the Darlington catalogue that two Judges officiated in the Pigeon department, and although knowing "nothing whatever about Mr. Botcherby's capabilities," taking the presence of the second Judge into consideration, he "cannot think the awards were so outrageously bad."

It seems almost ungracious to dispel this illusion, but the simple fact is, the other Judge merely exists in the imagination of "J. I. D.," for Mr. Botcherby officiated, as at Newcastle, *alone*; consequently, "J. I. D.'s" estimate of the decisions scarcely bears the significance he would make himself and others believe.

Then, relative to the other point—namely, "The silver cup for the best pen in the Show being awarded to an old Dun cock, a draft from the loft of one of our well-known exhibitors." "J. I. D." states he is prepared to prove that the bird was "under three years old," "and one of the best Carriers in the kingdom."

"J. I. D." has a task before him which is more likely to prove a fiction than the statements he impugns; and until such proof be forthcoming, your readers may infer that he is labouring under an hallucination, similar to that relative to his other Judge; and as his success has evidently been anything but "sour grapes" to himself, he will do well to rest on his laurels.—A FANCIER.

FOOD FOR CUCKOOS.

A CORRESPONDENT at page 142 wishes to know what description of food is best adapted for the cuckoo; and I think it may interest him to know that a friend of mine reared a young cuckoo last year, and from June to December fed it on chopped meat only. During the month of December, in consequence of alterations being made in my friend's premises, he removed the bird into a cold kitchen, where it died; and he ascribes its death entirely to the change of temperature, as it was in excellent health when removed.—W. GRIFFITHS.

I KNEW a cuckoo that was kept in a turnpike house in Monmouthshire through the winter of 1862. It was fed upon worms, bread-crumbs, and raw meat cut in small pieces. The bird was kept in a wicker basket cage. It was fond of bathing in a saucer, and when spring came was allowed to stay in the bath too long and died.—F. T. P.

WASPS VERSUS BEES—BARLEYSUGAR.

WHAT is the best plan of keeping wasps from consuming the produce of the bees? My bees are greatly teased with them this season. Although we have destroyed 160 wasps' nests within a radius of a mile, they seem now to be more plentiful than ever. How far do they travel? I have had one hive of bees entirely destroyed by them. A week since I went to look at my bees, as is my custom once or twice a-day, and I noticed that in one hive the wasps were going in and out with the bees. They seemed quite in harmony with each other. Not so the other hives, for if a wasp did present himself there was a battle, the bees generally proving victorious. I narrowed the entrances in all the hives, but it made not the least difference in the one alluded to, the wasps passed in and out just as fast as the bees. I watched them for some time, killing all the wasps I was nimble enough to get hold of, letting the bees pass unmolested by me, but it did not seem to make the least difference, for the more I killed, the more numerous they seemed to be, so I gave up the warfare.

I went again the next day, and behold there was nothing but wasps going in and out of that hive. I stayed some time

killing all I could get hold of as they were passing in and out, and at last I turned it up, and there was not a bee in it, nor any honey, and I believe the wasps were eating the comb. What had become of the bees, had the wasps killed and eaten them?

I see now that the wasps are visiting the other hives. One presents himself on the alighting-board of the hive, a bee attacks him, there is a battle, or more properly speaking a wrestle, the wasp generally is the victor, throws his antagonist off the alighting-board, and bolts into the hive. Should he meet with another bee, which is generally the case, he knocks that over, or to one side, and seems determined to go in; so I am in great fear I shall lose the whole of my apiary, unless I can stop the wasps in some way or other.

P.S.—What is barleysugar, and how is it made? I have seen it recommended for feeding bees, and I am sure I must feed mine, if the wasps let any of them live. I should have said that the most of my hives are the common straw ones. —J. BURN, Stapleton Gardens, Dorset.

[We believe the defunct hive had lost its queen, and, therefore, fell an easy prey to its enemies, whether wasps or robber bees, probably both. You seem to have rendered your bees almost all the aid possible by contracting their entrances, and destroying wasps' nests. We know not how far these pests may fly, but should fancy at least two miles. Try Mr. Taylor's plan of laying a piece of barleysugar across or just within the entrance of the hive, so as greatly to narrow it. "This," Mr. Taylor says, "is so attractive to the bees, that they muster at the door in greater force than the wasps durst venture to assail. As fast as the fortification is devoured it ought to be renewed, and the out-generalled enemy will retire from a hopeless contest." We shall be glad to hear if this mode of defence turns out successful. Strong stocks with narrowed entrances will probably hold their own until October, when the frosts of autumn may be expected to interpose decisively in their favour.]

Give any little boy a penny in the neighbourhood of a confectioner's shop, and he will most readily show you not only what barleysugar is, but how speedily he can cause it to disappear. Instructions for making it are given in page 25, of the last edition of "Bee-Keeping for the Many."]

SELECTION OF QUEENS.

A SWARM came off from a frame-hive on the 16th of this month. Thinking that the old queen would be safer to keep than the young one so late in the season, I secured her in a tumbler whilst I removed the frames to search for the young queen. Not being able to find her, I swept all the bees off the combs, and returned the frames to the hive in which I set the old queen at liberty. The following day I found the young queen with a few hundred bees on a tree, secured her, gave the bees some honey, and they have all returned to the hive. I send you the queen, and will you tell me if I did right, and whether I gave myself unnecessary trouble in changing the queens?—A NOVICE.

[You certainly did quite right in endeavouring to preserve the old queen, which was a very fine one, and in the prime of life; but, unfortunately, your well-meant efforts have entirely failed. A post-mortem examination of the queen enclosed in your letter proves her to have been the original matron of the hive, whose untimely demise is much to be regretted.]

SMALL SWARMS FORMING GOOD STOCKS.

I READ with interest in the *Times* "A DEVONSHIRE BEE-KEEPER'S" reply to "A BEE-MASTER'S" letter which appeared in that journal. I noticed, and noted to a friend of mine, the numerous inaccuracies contained in "A BEE-MASTER'S" letter, but did not think them worth a reply or correction. Had not "A DEVONSHIRE BEE-KEEPER'S" letters appeared in your columns, I should have remained silent; but one paragraph of his letter warrants my troubling you with this communication. He says, "If any one has a swarm [of bees] consisting only of 5000 or 6000 let him not take the trouble of hiving it." And again: "A swarm consisting only of 5000 bees has, it is said, been kept through the winter

by feeding, and has done well in a magnificent honey season." He appears to doubt the truth of this statement, for he asks, "May we venture to ask for particulars?" Now, I do not question the fact in the least, for I have achieved a similar result with a third swarm, which I obtained near the end of July, 1863. I do not think there would be more than, if as many as, 4000 bees in the swarm; for when in a cluster they appeared to be of about the bulk of a three-gill jug. Soon after I obtained them the weather broke; and, doubtless you will remember that the "back end" of last year continued very wet. A friend of mine, also an old bee-keeper, told me that they were worthless. However, I was not content to lose them if they could be kept, so I began to feed them with sugar and water. The result is that this year, within twelve months after they were swarmed, I have taken 25 lbs. of honey from them, and yet have left them far more than will be sufficient to keep them through the coming winter. They are now fast filling a large bell-glass, and of this I intend to deprive them shortly. They were hived in an empty hive. They cost me 5s. for sugar. They were hived in an ordinary straw hive, but I have since driven them into a wooden hive. Now, had "A DEVONSHIRE BEE-KEEPER" given me his advice, and had I acted upon it, I should not now have had 25 lbs. of honey, 1 lb. of wax, and a splendid swarm of bees; for his advice would have been, "Do not take the trouble of hiving them."

Before I close, permit me to add that I find the best remedy for a bee-sting is to puncture the place stung till it bleeds; very little of the pain or swelling will be experienced after the part has bled a little.—A LANCASHIRE BEE-KEEPER.

[Few persons have any idea how many bees may be comprised in an apparently small cluster. Although, therefore, "A LANCASHIRE BEE-KEEPER" thinks there were not more than 4000 bees in his swarm, I hope, in the absence of more precise evidence, he will excuse my thinking that there might have been nearly double that number. It should be remembered, also, that I was combating Dr. Cumming's absurd estimate of 5000 or 6000 bees being the number of an ordinary swarm, when I pointed out by way of antithesis that so far from this statement being correct, such a swarm would scarcely be worth hiving. I am well aware that a comparatively small swarm of bees may sometimes form a good stock if liberally supplied with food; but the smallest I ever knew succeed in this way weighed 1½ lb. Casts of less weight are, of course, well worth hiving, with a view of uniting them to others; but as the attempt to form them singly into good stocks must certainly fail in the great majority of cases, a few isolated instances of success, even if proved beyond a doubt, which I do not consider has yet been done, would not invalidate the statement that in the long run such liliputian swarms are not worth hiving for this purpose.—A DEVONSHIRE BEE-KEEPER.]

OUR LETTER BOX.

PREVENTING WILD DUCKS FLYING (*Chateaux Valon*).—The only effective way of pinioning wild fowl is to cut off the wing just above the spur. It is not a painful operation, and if the birds after the operation are turned into the water the bleeding stops, and there is no trace of the operation the next day. If you object to this, and wish only to cut feathers, cut down close to the quill as far as the first principal joint.

TURKEYS WITH SWOLLEN HEADS (*M. H.*).—Wash the head and face with cold water and vinegar. Feed on bread soaked in strong ale, and put camphor in the water they drink.

WHITE ELEVATIONS ON EGGS (*M. C.*).—The white spots on eggs are common occurrences, but are only noticed when on dark shells. It is no sign of disease. It is contrary to nature for your hens to be so broody, but as cooping for a few days usually cures them of it, we recommend you to use that remedy.

CHICKENS GASPING (*J. M. A.*).—From your description the gasping is incipient gapes. The only certain cure we know for it is camphor given internally in pills the size of a pea, and put in their water. Give them bread steeped in ale twice per day for three or four days.

DEATHS AMONG FOWLS (*J. M. L.*).—The Cochins-China hen died from the effect of the ulcerated leg, which wasted her to death; and it is probable the oil-died from fat, which very likely caused her to be egg-bound, and induce internal fever, which made her drink to excess.

CROOKS'S IMPROVED INCUBATORS.—Have any of your readers tried the above? If so, will they please report in your Journal what success they have had with them, and explain the method they adopted in using them, and how they reared the chickens hatched?—J. R. J.

MARRIOTT'S HIVES (*W. G., Longton*).—Marriott was a maker of bee-hives of all kinds. Those used by Mr. Piddington have Marriott's brass trade-plate upon them, and are the circular, straw, flat, wooden-topped hives with three bell-glasses and a straw cap to cover them.

TAKING HONEY (*M. C.*).—We must first know what kind of hives you use before we can advise you.

WEEKLY CALENDAR.

Day of Month.	Day of Week.	SEPTEMBER 6—12, 1864.	Average Temperature near London.			Rain in last 37 years.	Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock after Sun.	Day of Year.
			Day.	Night.	Mean.								
6	Tu	Hawthorn berries ripe.	69.6	45.8	57.7	16	23 af 5	34 af 6	55 10	23 8	5	m. s.	250
7	W	Marsh Glaeswort flowers.	69.6	47.2	58.4	17	24 5	32 6	59 11	59 8	6	1 54	251
8	Th	Sunflower flowers.	69.0	47.2	58.1	16	26 5	29 6	after.	48 9	7	2 14	252
9	F	Dog Rose leaves fall.	68.8	48.1	58.4	16	27 5	27 6	58 1	37 10	8	2 35	253
10	S	Yew berries ripe.	69.4	45.7	57.5	19	29 6	25 6	49 2	40 11	9	2 55	254
11	Sun	16 SUNDAY AFTER TRINITY.	68.4	47.1	57.8	10	31 5	22 6	55 3	morn.	10	3 16	255
12	M	Elder berries ripe.	68.9	44.8	56.9	15	32 5	20 6	13 4	52 0	11	3 37	256

From observations taken near London during the last thirty-seven years, the average day temperature of the week is 69.1°, and its night temperature 46.5°. The greatest heat was 86° on the 13th, 1858; and the lowest cold, 30°, on the 6th, 1850. The greatest fall of rain was 1.57 inch.

CRYSTAL PALACE GARDENS, 1864.



Do you ever see wedding without a bridegroom? Did you ever see a lady without a crinoline? Did you ever see a garden without grass? The first is a subject of natural history which we will leave the Registrar-General to answer; the second is a

phenomenon only now to be found at Vienna; but the last you may see any day at the Crystal Palace, and probably in front of your own window. Poor Mr. Gordon! Patience will do her perfect work with him this year—from the day of planting-out to this, except for a day or two, not a drop of rain, either early or late. Cold nights and hot sun and thousands of feet have done their work, and if any one has a common of good turf handy, doubtless the Directors will buy it at so much a foot to return their lawns. Good grass seed will also be at a premium. Messrs. Greens' mowing machines have been laid up, and, well as they do their work, what is the use of them when there is no work to do? And where shall we get cuttings from for next year? There is Mr. Fish, too, patient man! I went to see Putteridge gardens four weeks ago, and glorious they looked; but Mr. Fish exclaimed directly he saw me, "I am glad you are come this week, for next week I shall not have a *Calceolaria* left, and I have only 6 inches of water in the tank, and not a drop will they let me have from anywhere else; for cattle must have drink, though flowers perish."

The gardens at the Crystal Palace, had the season been decent, would this year have been glorious. There are some beds, also, which, notwithstanding the dryness, are very good: we shall come to them as we walk about. Next year, they tell me, there will be a station under the Palace, and you may be hoisted up into the building like a bale of goods, and stand at once, without fatigue, with the ices and other good things on one side and the gardens on the other; but this year I must request you to enter the gardens from the old station (a very dirty station it is, by-the-by), and you have the Rose Mount before you. A walk leading up the Mount, with four round beds on the left, a heart-shaped and two round on the right, directly faces you. The heart-shaped bed on your right has for centre Cottage Maid Geranium, then two rows of Crystal Palace, edged with Flower of the Day. Of the two round beds above, the first has for centre, *Pelargonium Floribunda*, a good white, edged with Golden Ivy-leaf Geranium; the second, for centre, Baron Ricasoli, one of the best of poor Mr. Beaton's last productions, edged with Crimson Minimum, a great

favourite of mine, so dwarf and compact, and, like a true Nosegay, an abundant bloomer. On the opposite side of the walk, supposing you are returning downwards, is a splendid bed of Geranium Brilliant, edged with Baron Hugel; next, Mrs. Whitty, edged with Golden Chain; then a bed of Trentham Rose Geranium, edged with Purple King Verbena; and at the corner facing the heart is a bed of a seedling *Tropæolum*, edged with Mangles' Variegated Geranium. *Tropæolums* are not suited for dry seasons; red spider attacks the leaves, and grow they cannot.

There are six walks leading up to the Mount with beds on each side. From two to four beds occupy the spaces between the walks. Supposing you are now on the great walk encircling the base of the Mount and going towards the Palace, you have the Mount on your right. Two beds occur here between the first and second walk. The first is a full moon of bright pink. Its centre is the loveliest of all pink Geraniums—*Sidonia*, with two edgings; the inner of Countess of Devon, a pretty little half-bred between the Fancy *Pelargonium* and the sweet-scented Hybrid Perpetual section; the outer edging is *Lobelia speciosa*. The next bed is filled almost to overflowing with Lord Palmerston Geranium, leaving just room for an edging of Cloth of Gold. It is a pity that the whole Mount is not surrounded with beds equally attractive with these two last; but they fail in half their effect for want of the green setting of live grass.

A heart-shaped bed at the corner of the next walk has Christine for centre, two rows of Flower of the Day all round, and an edging of a seedling *Lobelia* of Mr. Gordon's, something like *Paxtoniana*, named *Delicata*. To this walk there are given only four beds; of the two on the right-hand side, the first is *Calceolaria Prince of Orange*, edged with Lady Plymouth Geranium; the second is Alma mixed with *Lobelia speciosa*, a salad bed. Of the two on the left-hand side of the walk, the first is Beaton's immortal Geranium *Stella*, edged with Geranium *Pretty Polly*; the second is dark *Calceolaria*, seedlings of Mr. Gordon's, edged with Lady Plymouth. Between this and the next walk there is one round and two heart-shaped beds; the first, the round one, is planted in alternate circles with Blackheath Beauty Geranium, Golden Chain, and *Lobelia speciosa*; the heart bed, where a walk branches off to the Palace, is Crystal Palace Scarlet Geranium, edged with *Gnaphalium lanatum*; and the other heart-shaped bed at the corner of the next walk up the Mount, where there are two Elm trees with seats underneath, has for centre Geranium Cottage Maid, two rows of Gaines's Yellow *Calceolaria*, edged with two rows of Christine Geranium, with a fringe of a new *Lobelia*. At this walk, besides the heart-shaped bed at the corner, there are two on the right hand going up, and four on the left. The two on the right hand are, first, Cloth of Gold Geranium, mixed with *Lobelia Delicata* (in some lights a very effective bed); second, *Tropæolum*, edged with *Cerastium tomentosum*.

Returning down the walk, on your right you have, first, a seedling *Tropæolum*, edged with *Cerastium Bie-*

bersteinii; second, Geranium Cloth of Gold, mixed with a seedling Lobelia of a true blue colour, but weakly in habit, raised by Mr. Gordon, called Blue King; the third bed is a dark Calceolaria, edged with a dwarf Fuchsia; the fourth has been altered from its first pattern, which did not answer, to a mixture of Geraniums for the centre, edged with variegated Coronilla. Between the walk just described and the next are three round beds and a heart-shaped one. The first is Lobelia Blue King, mixed with a Verbena which will not grow; the second, Lobelia Gordoniana, edged with Geranium Flower of the Day; the third has for centre Geranium Emily, edged with Floribunda Geranium, and a curious little Geranium which I believe goes by the name of Black Prince; not, however, to be confounded with the Hybrid Perpetual of that name. The heart at the corner has Purple Nosegay for centre, two rows of Crystal Palace Scarlet all round, and is edged with Purple King Verbena. To this walk there are two round beds on your right going up, and four on your left. The first has Geranium Comte de Morny for centre, edged with Cloth of Gold; the second, a mixture of Lilac Ivy-leaf and Verbena Melindres, edged with Golden Ivy-leaf.

Returning down this walk you have on your right four round beds; the first, another mixture to correspond with the bed opposite, of Crimson Ivy-leaf and Verbena Empress Eugénie, edged likewise with Golden Ivy-leaf; the second contains a new Geranium, a seedling of poor Beaton's, which he himself thought and wrote highly of, but which rather disappointed me—viz., Cybister, edged with Cloth of Gold; the third is Gazania splendens, edged with Alyssum; and the fourth is a bed of Heliotrope. Between this last and the next heart-shaped bed are four round beds; the first is Cerise Unique Geranium, edged with a white Verbena; the second, Verbenas, centre Great Eastern, edged with a darker kind (I dislike Verbenas put next each other); the third, Tropæolum Triomphe de Hyères, edged with a darker Tropæolum; and the fourth Golden Chain and Beauty of Blackheath Geraniums in alternate circles. The heart-shaped bed has Perilla for centre, two rows of Gaines's Yellow Calceolaria round it, then two rows of Crystal Palace Scarlet Geranium, two rows of Prince of Orange Calceolaria, and an edging of Tropæolum elegans. A remarkable bed, and on the whole very telling.

We are now at the fourth walk up the Mount, on the right of which are two round beds and three on the opposite side. The first on your right going up is Cerastium tomentosum, mixed with Lobelia speciosa; the second is Geranium Lord Palmerston, edged with Baron Hugel. Returning downwards, on your right is a bed of the Hybrid Perpetual Geranium King Rufus, edged with Geranium Crimson Minimum; next stands a bed of Blue King Lobelia and Variegated Alyssum mixed; while the third, at the corner, has for centre Crimson Minimum Geranium, edged with Floribunda.

There are four beds between this and the next walk; the first is planted with dark Calceolaria, edged with Geranium Golden Chain; the second has for centre Nierembergia gracilis, edged with Nemophila prostrata; the third, Tropæolum, edged with Variegated Alyssum; and the fourth, Prince of Orange Calceolaria, edged with Heliotrope Miss Nightingale. The heart-shaped bed at the corner is nothing particular, but going up this, the sixth walk on your right, are two round beds, the first containing a scarlet Verbena, edged with a white one; the second, a fancy mixture of variegated Geranium Prince of Orange, and a dark Verbena, edged with Golden Chain Geranium.

Turning down again you have on your right four round beds; the first is Verbena Melindres, mixed with Geranium Lady Plymouth, edged with Geranium Golden Chain; the second, Purple King Verbena, edged with a white one; the third bed is Fuchsia fulgens, edged with a white one; the fourth, Gazania splendens, edged with Arctotis reptans. We have now only three more beds, and we come to our starting-point. The first at the corner is a mixture of Geranium Dandy and Lobelia speciosa; the second is planted with one of the Hybrid Perpetual Geraniums, edged with Cineraria maritima; and the third and last with Gaines's Yellow Calceolaria, but the edging I do not remember.

At the upper part of the Rose Mount is a bed going all round outside the arches, forming a sort of collar to them. It is planted this year with a zigzag pattern of Geranium Christine, Purple King Verbena, Geranium Flower

of the Day, Calceolaria Aurea floribunda, and Lobelia Paxtoniana. It would have been very effective. As it is, except on the east side, owing to the want of rain, the plants have grown smaller and smaller every day.

The beds I now propose you to look at are those on each side of the grand central walk leading from the central basins to the upper terrace. They consist of round and long beds; the round are planted with Perilla for centre, a circle of white Pyrethrum, and then a circle of Crystal Palace Scarlet Geranium, edged with Mangles' Variegated Geranium. The long beds have a stripe of Geranium Trentham Rose down the centre, a stripe of Aurea floribunda Calceolaria on each side, then two rows of Christine Geranium, and an edging of Purple King.

The upper terrace is very gay, though not up to its usual mark. Let us begin at the west end, and we have five round beds separated by beds of evergreens. The first round bed at the west-end of the terrace has for centre Geranium St. Clair, a circle of Beaton's Nosegay Black Dwarf, a circle of Cloth of Gold Geranium, edged with Blue King Lobelia. The second bed has for centre Beaton's Nosegay Geranium Baron Ricasoli, a circle of Geranium Golden Chain, a second circle of Geranium Beauty of Blackheath, a third circle of Geranium Silver Queen, edged with Lobelia speciosa. The third bed has for centre Perilla, a circle of Centaurea candidissima, a circle of Geranium Golden Chain, edged with Lobelia speciosa. The fourth bed has for centre Centaurea candidissima, a circle of two rows of Amaranthus melancholicus ruber, another circle of Geranium Cloth of Gold, edged with a little pink-flowered Mesembryanthemum or Sedum. The fifth bed has for centre Perilla, a circle of Centaurea gymnocarpa, a circle of Geranium Golden Chain, the whole edged with Blue Lobelia.

These five beds, as well as the five corresponding to them at the east end of the terrace, which are planted bed for bed exactly alike, are trial beds, in which new Geraniums or bedding plants are tested, and new combinations proved. Geranium Black Dwarf is comparatively a new one, and a great beauty; very dwarf, large full trusses, and rich healthy foliage. The variegated Geranium Silver Queen was brought out by Messrs. Henderson some years ago. There are now several improvements on it, Oriana Improved being the most recent. Geranium Blackheath Beauty might be greatly improved; it is not satisfactory, though the best of the salmon colour. It is used very effectively in a bed on the Rose Mount in alternate circles with Golden Chain Geranium.

We are now at the west end of the semicircular walk which bisects the great terrace. On our right are a series of circles surrounding vases and statues: these are planted chiefly with Geraniums Trentham Rose, Crystal Palace Scarlet, and Christine, edged with Flower of the Day. You will have no difficulty in making out such well-known favourites.

On our left, however, are some novelties. Observe, there is an outer edging of Lobelia to each bed, while a string course, marked by using variegated Geranium Flower of the Day, divides each bed into three parts, and four little angles are formed by the intersection of the string course. Well, in the first bed at the corner on your left, Lobelia Paxtoniana goes all round; the two end divisions are Geranium Lucien Tisserand, the centre Hybrid Perpetual Geranium Diadematum erubescens, while the little angles are filled with Harkaway Geranium. The second bed at the two ends has Geranium Sidonia, central division a dark Calceolaria, name unknown, while the angles are Geranium Harry Hieover. These two liliput Geraniums, Harkaway and Harry Hieover, are used alternately in the angles of each bed; I shall not, therefore, repeat them in each case, but only give the two ends and centre. The third bed has at each end Tropæolum elegans, Helen Lindsay in the centre. The fourth has Geranium Madame Vaucher at the ends, Nosegay Geranium Black Dwarf in the centre. The fifth has Prince of Orange Calceolaria at the ends, Geranium Fatinitza in the centre; and the sixth bed has for ends Shrubland Rose Petunia with a centre of Nosegay Geranium Stella. These six beds are repeated bed for bed on the opposite side of the half circle, except the one at the corner next to the grand terrace walk, which for ends has Blush Minimum Geranium, with G. Diadematum erubescens for the centre.

The chain pattern in the sunk panels is remarkable chiefly for the number of yards of Variegated Alyssum. They

looked very well from the balcony of the Palace, though perhaps by the time this appears the Calceolarias are out of bloom.

The grand terrace is gay as usual. The beds here at all events have not done badly. Mr. Vyse has plenty of water close at hand. The long beds have for centre Geranium Cottage Maid, a stripe on each side of Geranium Flower of the Day, edged with Verbena Purple King. The round beds have Geranium Christine for their centre; then a circle of *Aurea floribunda* Calceolaria, edged with *Lobelia Paxtoniana*.

On the whole, though Mr. Gordon has displayed his usual talent, and invented many new combinations of colours, the Crystal Palace Gardens this season cannot give the usual satisfaction. The want of grass, and even the dustiness of the shrubs, leaves nothing for the eye to rest upon; and though the papers speak of heavy rain on the Foresters' fête day, it came too late to do any good. To Mr. Gordon we have been indebted in former years for many bold but beautiful combinations of colour; as, for instance in 1860, when the grand terrace long beds were planted with Crystal Palace Scarlet Geranium for centre, Verbena Purple King on each side, edged with *Tropæolum elegans*—nothing could exceed the beauty of those beds that year. Then, I think, the next season the same beds started more criticism than was pleasant at the time. What! scarlet and pink next each other! and yet those beds have been imitated by almost every lady who plants her own garden. The fact is, the effect of colour produced by flowers with the various accessories of foliage, and light and shade between the leaves, can never be judged of by the same rule as you would decorate a room or design a ribbon; and this Mr. Gordon found out, and he has gained a celebrity for good judgment and taste second to none.—F. W. ADY.

HOUSE FOR VINES, PEACHES, AND GREENHOUSE PLANTS.

THE following is in answer to "N." and other inquirers on the same subject.

The house which you have moved from one place to another is 56 feet long, 17 feet wide, and 13 feet to the apex, there being a short hip behind of slate; the sloping roof is of fixed sashes; ventilation by boards in the back wall below the slating, and by sliding 3½-foot sashes in front. 23 Feet is to be appropriated to Peaches, and separated by a glass partition from 33 feet for Vines. It is intended to have a stage against the back wall for plants, and a raised bed inside in front, separated from the part behind by a wall 2½ feet in height, and connected with an outside border by means of arches and brickwork beneath the sill-plate on which the upright moveable sashes are placed. Heating is proposed to be effected by a tile flue along the back wall, and a four-inch pipe on a raised brick curb a couple of feet or so above the flue, returning in a chamber beneath the pathway, with a grating over it. Counsel is asked as to external, and more especially as to internal, arrangements; and if we do not follow exactly the line of your separate questions, it is that "C.," "A LOVER OF PLANTS," and "AN ADMIRER OF THE VINE," may be answered also at the same time, as they with you desire no more heat than will just keep plants safe and mature the fruit without forcing.

First, then, as respects the roof, which is in front of three divisions of sashes, there is no objection whatever to its being fixed; but as, independently of the shade of the rafters, the sash-bars are not more than 5 inches apart, and the glass in very small squares, we certainly should not have contributed to the shade in dull weather by having a short hipped roof at the back formed of slate. In a very cold exposed place such a roof on the north side might be justifiable on the score of protection, but on no other consideration, as to make that slate roof secure would, we think, cost rather more than a fixed roof of wood and glass. For such a roof, and glass 5 inches across, from 2 to 2½-inch sash-bars would be sufficient, and without any rafters, so as to harmonise with the glass in front; and we think that, independently of the appearance and the additional light thus given to fruit and pot plants, the expense would be less than the secure slated roof.

Secondly. The proposed ventilation will be ample without having any of the roof-sashes to move; and this of itself is a great matter of economy in labour and expense, as sliding sashes on the roof are always attended with liability to smashes and crashes.

Thirdly. You propose the inside border to be 7½ feet wide and the outside much the same; and for a house 17 feet in width we do not think that is too much. But as you evidently wish to limit the width of these borders you may with propriety make them 12 or 18 inches narrower both inside and outside if it serves any peculiar purpose, such as having more room for a stage behind, as both Vines and Peaches will thrive in narrow spaces if they are well fed from the surface. We would not, therefore, altogether object to a border of 10 feet; but if there was no objection to doing so, if we curtailed the inside to 4 or 5 feet instead of 7½ feet, we would widen the outside proportionally, so as to make it some 14 or 15 feet altogether. Ten feet altogether, or even less, would do if there were any particular object to serve and rich top-dressings were given; if not, it would be well to have from 14 to 15 feet in width altogether.

Fourthly. It would not be wise to make up a deficiency in narrowness by depth. If at all in a damp neighbourhood it would be well not to sink the border much below the ground level. We presume from your drawing that outside and inside you propose your border altogether to be 5 feet in depth, something like half being above the ground level and half below it. We would advise making it little more than 3½ feet; and of that, besides the drain, taking 15 inches for open rubble at the bottom and 27 inches for soil. This would secure the soil for the roots being entirely or nearly so above the ground level. The inside border should not slope from front to back, but if not level should slope from back to front, and, instead of being lower, should be an inch or two higher than the outside border. No greater error can be perpetrated than planting trees in a low border inside, and expecting the roots to find their way through arches into a border a foot or 18 inches higher outside.

Fifthly. No better plan for security can be found than building the front wall on arches. In many cases the top of the arch is made too low to be fully serviceable. In your case the inside and outside soil seems to rise some 15 or 18 inches above the top of the arch, and roots must descend that depth before they can get out. We would like the crown of the arch to be within a few inches of the surface—in fact, for combining economy and suitability, we would have no arches at all, as you show no brickwork outside the house; but we would have piers of the necessary height, 4 feet apart, as you have them, and on these piers we would place a sill of iron, or of stout wood lined with galvanised plate iron or lead beneath, and pack the soil, inside and outside, up to it. When the soil sunk a little there, we would just add a little more, to prevent any air entering there. This would suit the roots of Vines and Peaches much better than having the crowns of arches sunk much beneath the surface-level. The only objections are the necessity for protecting once or twice a-year, and the greater facility given for the entrance of vermin, as rats and mice; but even the arches will not prevent that if the vermin are not looked after. We caught a mole the other day in the viney, where he was burrowing famously, but we can hardly conceive how he could have got in, except by burrowing beneath the foundations. Like thieves, vermin are not easily kept out when they are resolved to go in.

Sixthly. As to heating, the furnace and boiler are well placed, provided you need them both, as the top of the boiler will be lower than the level of the floor. We cannot say, however, that we approve of your mode of heating, as, in a house 17 feet wide, the heating power will be against the back wall of the house, the return single four-inch hot-water pipe only being placed in the middle of the house, and that sunk underneath a grating. There seems to be no necessity for sinking such a pipe at all. The heating would be far more effective if you took the flow and return across one end, and placed them side by side, some 30 inches from the upright front sashes, and 2 or 3 inches above the level of the inside border. Small piers there, every 9 feet or so, according to the length of the pipes, would cost no more than the wall on which the pipe rests close to the back wall, and you would escape all sinking of the pipes along the

floor, and the attendant grating. We would leave the flue as you propose, close to the back wall; and when you put on a fire it will enable you to give air by the wooden ventilators on the north side more freely. You speak of a twelve-inch tile flue. Is it to be covered by tiles of that width, or is it to be made of earthenware pipes some 12 inches in diameter? If the latter, the first 6 feet of the flue from the furnace should be built of bricks in the usual way, and at the end of that, and the other end of the house, there should be square places of a foot left, so that the flue could be cleaned without moving the round pipes. Portland cement is the best material for fixing such pipes, so as to keep them smoke-tight. The next best is fine lime, putty, and sharp sand.

Seventhly. If these two divisions were to be heated separately, it would be best to place the boiler between them, and take the pipes right and left, to be worked together or independently of each other. If the same flue and pipes are to heat both divisions, without any valve or other stoppage—that is, when you heat one house you must also heat the other—then it will be best to have the stovehole, flue, and boiler placed at the extreme end of the vinery. The flue and the flow-pipe there will always be warmer than at the other end; and Vines, when in a state of rest, will bear more heat than Peaches will do in a similar condition. You may safely keep a temperature of from 40° to 45° from fire heat in your vinery all the winter without prematurely exciting your Vines. You could hardly do the same thing long in a Peach-house, if the temperature from fire heat went much above from 37° to 43° by fire heat. In the vinery, therefore, you could keep in winter plants needing the most heat; and the temperature in the Peach-house you could keep lower by giving more air, and use it for hardier plants. For instance: you could keep Camellias, Geraniums, &c., in the vinery; Verbenas, Calceolarias, &c., in the Peach-house, and yet bring forward the buds in neither house much before their usual time.

Lastly. If the Vines are thus allowed to break naturally, most greenhouse and bedding plants may be kept in it from the time the Vines are pruned until the fresh leaves begin to impart too much shade, when a few things that delight in shade—as Ferns and Begonias, might be grown on the stage in summer, and tender annuals if the stems of the Vines are 3 to 4 feet apart. Similar treatment, except a lower temperature, may be adopted in the Peach-house until the bloom is set, and before the foliage is much expanded. If the trellis for the Peach trees extends all over the roof, up to the top of the back wall, then you will grow nothing well on your stage in summer except what loves the shade; but as soon as the leaves are off the trees in the autumn, you may fill your house with plants until the fresh leaves of the following year make it too shady. One of the best modes for combining the useful and the ornamental in a Peach-house, with the roof covered by the trees, that we have met with, was not having any stage, but covering the back wall with Camellias, and setting plants on boards on the floor in the winter. From November to April the wall was a beautiful sight. The shade in summer just suited the Camellias, and the leaves of the Peaches were gradually thinned in the end of summer to secure the ripening of the buds. It would be a bad policy to have many plants in either division when the fruit was ripening.

The stage may come far enough forward to secure from 30 to 36 inches for a pathway between it and the raised bed in front, and a moveable trellis might also be laid across that bed, so that every part of the interior could be a greenhouse in winter. This, with a little care, need interfere nothing with the health or the fertility of the fruit trees.—E. F.

THE MUSCAT GRAPES.

THE question of the difference between the several varieties of Muscat Grapes has at length been settled by the Fruit Committee of the Royal Horticultural Society on Tuesday last. For many years there has been a great diversity of opinion among Grape-growers as to the characters of the various forms of the Muscat of Alexandria; and by way of ascertaining and determining wherein these differences lay, the Fruit Committee obtained from the most authentic sources the following varieties, which were all

planted in the same house, set apart exclusively for that purpose:—Muscat of Alexandria, Muscat Escholata, Barnes' Muscat, Tottenham Park Muscat, Denbies Muscat, Charlesworth Tokay, Tynningham Muscat, Passe Muscat, Bowood Muscat, and Canon Hall Muscat. The last has always been allowed to be distinct from the others, and is at once known by its very large and almost round or roundish oval berries. After having grown these varieties under the same conditions in a Muscat vinery, and fruited them for two years past, the Committee after very careful comparison came to the conclusion that Muscat of Alexandria, Muscat Escholata, Barnes' Muscat, Tottenham Park Muscat, Denbies Muscat, and Charlesworth Tokay, are all the same variety under these different names; and that Bowood Muscat, Tynningham Muscat, and Passe Muscat, differ from the others in being much better setters, but that these three bear a close resemblance to each other. Thus this vexed question of so long standing is settled in a way and through a process that can leave no farther doubt on the subject.

MY ORCHARD-HOUSE—No. 8.

AFTER a two-months drought this island was suddenly visited by a violent storm of wind from the north-east, accompanied by heavy rain, on Monday the 22nd ult. Many visitors, during this the season, had occasion to remember this date, as special excursion trips had been organised by sea and by land. About three hundred (among whom was this Journal's correspondent), had started early on board a small steamer for Serk, eight miles distant. The morning was overcast, and rain clouds were massing themselves gradually in the eastern sky, but no one anticipated the storm of wind and rain which obliged us, together with another strong party of excursionists from Jersey, to seek shelter all over the island, and finally to re-embark, from an open beach, in crowded boats under a drenching sheet of rain. Huddled together on the open deck, unable to move hand or foot, the violent lurchings of the steamer (whose only safety lay in its splendid pilotage), produced a succession of ludicrous episodes, such as are only to be met with in "pleasure trips." Many of the female excursionists had already been laid prostrate on the beach after the journey out, and on their return their sufferings were great indeed. I do not think we were sufficiently thankful, at that dismal period, for the heavy rain, under which the very waves appeared to smoke. The island pastures, however, burnt to a pale yellow, seemed to rejoice under the welcome downpour, which was truly valuable after so long a drought; and our tanks became completely filled during the night. I do not remember this as having ever occurred in one night before.

The violent gale increased during the night, and the next morning the ground was strewn with leaves, and, alas! many a fine Pear and Apple. At such times one is apt to reflect on what is really the best form for a standard fruit tree to assume. That form which best obviates the risk of the boughs clashing together, is not always the one most favourable to admit the sun's rays equally over the tree. In these stormy isles we are not agreed on this point. Some are strenuous advocates of the pyramidal form both for Pears and Apples, and it certainly seems the best calculated to prevent the lateral branches from rubbing together. Observe a bush tree trained in that beautiful shape "*en gobelet*" in a gale of wind. See how the branches intermingle as they sway in the blast, rubbing away shoots and fruit; but what an admirable plan to admit light, warmth, and air to all parts alike! Supports, ties, wires, have all their objections.

In the orchard-house all was calm and fair on my return. The ventilators to windward had been closed, those to leeward were left open, and only a grateful feeling of shelter and pervading moisture met me after so much exposure. This was one of many moments when the protection afforded by glass structures to such valuable fruit as Peaches and Nectarines, then in the very height of their season, was fully demonstrated. Not only so, but it was inexpressibly delightful to find oneself thus able to pace along the plank path (a plan I strongly recommend to amateurs), heedless of the raging wind and cold rain outside of the house. All the beautiful fruit still hanging on the trees seemed to welcome their master back.

There is a point of view from which we should sometimes survey our orchard-houses. It is the shelter they give us, in addition to the fruit, which is so valuable. Avoiding as much as possible the midday sun, in the early morning and late evening, on a calm summer moonlight night, or on a wet and windy day in autumn—where is there a healthier or more agreeable lounge? New and rare fruits develop themselves under our eyes, we watch their various forms and different colours with always a new pleasure, and when at last we gather them, and sit in solemn judgment on their merits, there are few purer amusements in this world, and not many obtainable at so easy a rate. An amateur in ten years sees and knows actually more about the habits of these first-rate fruits than his ancestors did about ordinary specimens in a century. He has them all present, side by side, growing under precisely the same conditions, and so can readily compare them. The cultivation in pots enables him to multiply them, and to fruit them sooner.

The back wall of our house, 125 feet long, is planted with trees trained *en cordon*, an excellent plan, and which must eventually supersede large fan-trained trees under glass. These trees are planted at intervals of 3 feet, and trained as diagonal cordons at an angle of 45°. The shoots are pinched in much as those on the potted trees are—that is, closely spurred, and they produce well. But their best recommendation is that by this means the wall is clothed much sooner, the trees are kept more in hand, become sooner fruitful, and a greater variety of sorts is obtainable. We begin one end of our wall with an early July Peach, and end it with a November Peach. For about four months that wall absolutely shines with splendid Nectarines and Peaches of rare and delicate habit. For that period I am able daily to place a dish on the table such as few could match. Some fine new orchard-houses in both islands are organised on this system. In one, in particular, which is worked by the only gardener in Guernsey who knows anything about orchard-houses, in this, the first year of bearing, about 320 splendid fruit were grown. In Jersey a noble house now building, in the form of a T, which I have had the pleasure of organising, is also on this system, and I have no doubt will be equal to most good houses even in England.

The difficulty in every case has been to find gardeners willing and able to manage these new structures. When beautifully finished, and stocked with trees in a bearing state, incredible errors continually occur. This is the true cause of failure. From what I have seen I am ready to believe any amount of mistake; but the system itself is sound and practicable. No doubt we have much to learn still, but we shall learn it. One thing I myself have found out, which some years ago seemed out of the question, and that is, that orchard-houses must not be narrow. When trees become of a certain size they are difficult to manage. All previous arrangements are upset, and expensive changes occur. Therefore, let us build our houses of a good width at the first. The amount of fruit that is wasted from inability to gather it without knocking down the produce of surrounding trees is very great. To prune a few summer shoots costs at such times a dozen Peaches. As all that falls is valueless, even for home consumption, this evil requires a strong remedy. Again: narrow houses are subject to sudden draughts, which shake down many a fine fruit; these houses are also more liable to attacks of red spider. The trees which are in untidy corners are the first attacked; then if, as during the last month, tanks fail, and fierce gleams of sun fall on leaves near the glass, that which is at all attacked by the red spider is sure to dry up and wither. The tree has then to make new leaves, and cannot do much with these for next year's crop.

We have gradually left off syringing, as, without more care than can be expected of a servant, the force of the water loosens the fruit more or less. Watering at the roots is still of great value, though not so much so as during the time the fruit was swelling. Apricot trees after fruiting require far less water; indeed, their leaves never droop now. The second crop of Figs remains small, too small for success. Irregularity of watering is the cause, as "R. F." says, and he is always right.

The growth of our orchard-house trees has been chequered this year. The early shoots had a hard battle for life with successive attacks of green fly, and the later ones are ripe,

but feeble. August shoots are more vigorous, but no dependence can be placed on these for fruit even here. It is probable that these if left would carry us as far as the blossoming process, or even the stoning, but no further; so, if not of a fit colour, these are to be shortened-in in October. The long drought and heat, however, has been generally favourable to all fruit trees.—T. COLLINGS BRÉHAUT, *Richmond House, Guernsey*.

ORCHIDS AND GRAPES.

We some time ago, in speaking of Mr. Warner's cool Orchid-growing, remarked that this was conducted in an ordinary vinery, under Vines which are trained up the rafters; and we remarked at the time that upon such a system not only could the Orchids be grown with perfect success, but an excellent crop of Grapes could be obtained, which would go far in reducing the expense of the fuel required to keep out the frost during winter.

As an evidence of the truth of this, we received from Mr. Warner the other day a bunch of Black Hamburgh Grapes, which in size and colour was in fine condition. It was a fine tapering bunch, well shouldered, and weighing 1 lb. 5 ozs. The berries were large, the bunch having been judiciously thinned at the right time. The colour was quite black, and the flavour excellent. With such an example before us none need despair of growing Orchids and Grapes in the same house. In a note which accompanied it Mr. Warner says:—

"I send you a bunch of Grapes from one of the houses you saw when at Broomfield. Brazil Orchids, Guatemala Orchids, and Indian Orchids, such as *Dendrobium nobile*, have been grown and bloomed well in this house.

"You will know from the colour of the Grapes that abundance of air must have been given. The roots of the Vines are confined in a brick pit inside the house on a clay subsoil. If a good well-drained border could be given them the bunches and size of the berries would be much larger."

"WATER, WATER EVERYWHERE!"

WHAT a blessing to live in a well-watered country! Hertfordshire for the greater part is a county remarkable for its pretty undulations, the valleys teeming with springs and small perennial streams. The district to the east of Hertford to Sawbridgeworth, the extreme eastern point of the county which there joins Essex, is highly favoured by springs in the little valleys, often on the surface, and always at a small depth beneath it.

The years 1825, 6, and I think 7, as far as I recollect, approximated to this season and the last. Water became scarce, and I had a new well 8 feet in diameter dug in a sandpit. On reaching a depth of 24 feet a beautiful spring was found, which rapidly rose so as to stand 8 feet deep of water. It has continued to this day to furnish abundance, and has never failed, although from ten to fifteen thousand gallons of water have been pumped daily since the beginning of May, with a pump worked by a pony, into a large elevated tank which supplies several others at a lower elevation.

Last season I somehow instinctively anticipated a dry summer this year, and fearing that one well might fail—in fact, I was alarmed on thinking of the consequences of water failing—I selected a site at the foot of a hill some five or six hundred yards from the other well, and had another dug of the same diameter. On reaching the depth of 15 feet the water rushed up through the sand and stood 10 feet in depth. My original well has once or twice required one or two hours' rest in the middle of the day, but the water has soon flowed in rapidly, and now stands at 5 feet; in my new well it stands at 7 feet. They both seem inexhaustible. I have been tempted to write a few lines about the water from these wells because I observe Mr. Robson gives directions respecting the use of well water. Our water is full of carbonate of lime, so much so, that the stems of orchard-house trees syringed with it become at the end of the summer quite white. It is, therefore, what is called hard to a certain extent; still there must be some quality in it favourable to vegetation, for when exposed to the sun for thirty

six hours, the second day a miniature forest of conservæ is seen springing from the bottom of the tank, looking so delicate and feathery that no fernery can equal it. The oddest thing about this well water is, that owing to the enormous quantity required hourly in hot weather, it is used without being exposed to the air, and yet it gives most extraordinary health and vigour to the many thousands of Vines and trees in pots it is given to. This is so against all rule that I am tempted to write it to show for the thousandth time, "There is no rule without an exception." I may add, that our surface springs in our little valleys are still running freely, making us truly grateful for "water, water everywhere!"—T. R.

ROYAL HORTICULTURAL SOCIETY.

AUGUST 30TH.

FRUIT COMMITTEE.—A meeting of the Fruit Committee of the Royal Horticultural Society was held at Chiswick on Tuesday last, George F. Wilson, Esq., in the chair. The object of the meeting was to examine the collection of Muscat Grapes which has been planted in a house devoted exclusively to their cultivation. The result of the observations of the Committee will be found in another paragraph of our present Number. It is quite evident that there are but three distinct forms of white Muscats, the white Muscat of Alexandria, the Bowood, to which Tynningham and Passe Muscat are very similar, and the Canon Hall.

Mr. Veitch, of Chelsea, exhibited one very large and two smaller bunches of Muscat Champion, or as it was formerly called, Champion Hamburg Muscat, a name quite inapplicable, seeing it has no relation to the true Muscats, except that it has a Frontignan flavour. The name will, therefore, henceforth be Muscat Champion, from its being raised from Champion Hamburg crossed by Canon Hall Muscat. The berries were large and well grown, and the colour was better than when it had been shown on former occasions, but it was still deficient of the true black which it is, no doubt, capable of receiving when better cultivated. In regard to flavour it maintained the high opinion the Committee formerly expressed upon it.

In the house containing the collection of Muscats, there is a Vine of Trévère Frontignan, producing fine bunches and large round berries, the flavour of which is very rich and vinous. The Committee recommended this variety as one of first-rate quality.

The Committee then proceeded to the examination of the collection of Plums grown on pyramid trees, and among those recommended as first-rate dessert sorts were Angelina Burdett, Belgian Purple, Reine Claude Violette, Jefferson, Prince Engelbert, and Denniston's Superb.

AN ORCHARD-HOUSE EXPERIENCE.

I HAVE for some time past wished to communicate to your readers my experiences of orchard-house culture. My not being a professional will be an objection in the eyes of some people, my being but an amateur will have weight with others. I am but a young hand at any kind of gardening. Until the summer before last I had never grown a Peach, and until 1860 I had not a foot of garden ground. I have had everything to learn, and when a man gets beyond fifty it is not always easy to acquire; at the same time I had no old theories or prejudices to get over.

Last March two years I bought four trees in pots, and the Peach tree produced me four handsome fruit. I was delighted, and having seen Mr. Rivers's book on orchard-houses, I determined to try my hand at that mode of culture. In the autumn of 1862 I went to Sawbridgeworth, and saw Mr. Rivers's houses and trees, and purchased some of the latter. Last summer (1863) I had some very fine fruit, and in the winter I built an orchard-house.

This spring my trees were very handsome while in bloom, and the fruit set on all kinds very freely. Peaches, Nectarines, and Apricots, of course, I had to thin out again and again. In June I showed six trees at the Isle of Wight Horticultural Society's Show at Ryde. They were much admired, being clean, and loaded with fruit. One of the

Peach trees, Padley's Early Purple, bore four dozen, and I was reminded by a friend who is clever in his profession, that the fruit would be small, that my trees were overstocked, &c. I thought so too, but replied we shall see. That tree ripened three and a half dozen of Peaches, which sold at 6s. per dozen, and the other half dozen were larger than my friend produced in his house.

The season has now passed. I have gathered sixty dozen of the several kinds of Peaches, Nectarines, and Apricots. All my trees are in pots. Every tree is clean, and the fruit-buds well developed. I have not a single bad tree, and more, I have not used smoke or sulphur during the whole summer. I commenced gathering in the middle of July. Peaches, home and foreign, are as plentiful as Apples just now; but the trade will give me 1s. 6d. per dozen more for mine than for the best out-door brought to them.

My trees are young, but they have ripened one dozen and a half each on an average, and all fine fruit, many weighing 7 and 8 ozs.

At the Isle of Wight Horticultural Society's Show, held on the 17th ult., I exhibited twelve Peaches—viz., four Grosse Mignonne, four Early Crawford, and four Noblesse. The largest of the twelve was an Early Crawford, it weighed 9 ozs., and measured 10½ inches in circumference. I also showed twelve Galande, weighing collectively 3 lbs. 12 ozs., and very handsome they were. Everybody said they never saw the like, and I was glad to get out of the way. This may appear egotistical, but it is, nevertheless, true.

Many of your readers do not believe in pot culture. I have seen some miserable failures, but I think I have succeeded in producing quantity and quality. I have a few Barringtons left that will weigh 7 or 8 ozs.

I have sometimes thought that both Mr. Rivers and Mr. Pearson were disposed to exceed the possibilities of the system of pot culture, but I have hitherto had no difficulties, and have realised all and more than I expected.

I have found it necessary to work every day, to watch and tend; but the results have afforded pleasure and profit. Not only do my trees afford recreation and amusement to myself, but to a large circle of friends, and to many strangers who happen to hear of my pets.

With your permission I may at some future time have a word to say to amateurs, and any who purpose to try for themselves. Should any of your readers be visiting Ryde, I shall be happy to show my house and trees. Mr. Redman, fruiterer, opposite the pier gate, Ryde, would direct to my residence.—C. COLENTUTT, *Homelands, Ryde, Isle of Wight.*

ACER LOBELII.

MR. NEWTON having in a late Number of THE JOURNAL OF HORTICULTURE drawn attention to that fine American tree *Acer macrophyllum*, allow me also to describe another fine Maple, *Acer Lobelii* (Tenore), which, although introduced into England about the same time as *Acer macrophyllum*, is still very rarely to be seen in pleasure grounds, and almost unknown, except in a few of the leading nurseries.

The *Acer Lobelii* was first brought into notice and critically described as a distinct species about half a century ago, by Professor Tenore, of Naples, in his "*Flora Neapolitana*." More recently Mr. George Don, in his edition of "*Miller's Dictionary of Gardening and Botany*," by some oversight not easily accounted for, makes *Acer Lobelii* and *platanoides* the same species; while Mr. London, in his great work the "*Arboretum Britannicum*," puts it down as a variety of *Acer platanoides*, but with a remark that "it is one of the most beautiful *Acers* in cultivation." No two species of *Acer*, however, can be more distinct or dissimilar in habit than *Acer Lobelii* and *platanoides*, for *Acer Lobelii* has an upright-growing head, rather thinly furnished with branches and branchlets, and glossy pea-green shoots, striped somewhat in the manner of those of *Acer striatum*, or the Snake-barked Maple of America. The shoots are also more remotely clad with leaves, which are seldom more than 3 or 4 inches broad, but thick in texture, glaucous green in colour, and bluntly lobed; while those of the Norway Maple (*platanoides*) are dark green, thin in texture, acutely and distinctly five-lobed, and 6 inches broad. Again, the Norway

Maple only forms a medium-sized tree, with a dense, leafy, spreading, round, bushy head, full of irregularly extended branches and small spray of a dark brown colour when matured; while the *Acer Lobelii*, on its native mountains in Naples, forms a large erect tree, with not very many branches or much spray, but with rather stout, erect, straight, glossy, pea-green shoots, more or less streaked with white. The leaves are very slightly heart-shaped at the base, quite smooth, thick in texture, shining above, and of a glaucous green colour, with the lateral lobes of the leaf less developed and abruptly pointed.

The *Acer Lobelii* is said to have been introduced by Lord Coventry, and first planted at Croome, his lordship's seat near Worcester, where, according to Mr. Loudon, the finest specimen of the tree in England was to be seen in 1839, it being then 20 feet high, and in some years it bore seeds.

The tree is perfectly hardy, of rapid growth, and one which certainly deserves to be planted in all pleasure grounds or parks, on account of its stately appearance and cheerful aspect. It was first introduced into England in the year 1826, according to Mr. Sweet.—GEORGE GORDON, A.L.S.

RED SPIDER ON VINES—PRUNING FILBERTS. CALCEOLARIAS DYING OFF.

I HAVE at the back of my viney some Peach and Nectarine trees, which are much infested with red spider. Although the crop has been gathered for more than a fortnight I have been afraid to syringe, or use any means to destroy the insect, as my Grapes are now pretty well ripe. I now perceive that it has commenced its attacks on the leaves of my Vines, as likewise on some Capsicums which I have growing in pots in the same house. The latter I have dipped in Gishurst compound at the rate of 1 oz. to a gallon of water, but should be glad to be advised by you what to do to my Vines and Peaches. As the Grapes are now ripe, I am afraid to syringe them with the mixture.

How should Filberts be pruned to keep them dwarf?

My *Calceolaria Kayi* keeps dying off, even plants that have been in and flowered all the summer before. I have a bed of *amplexicaulis* by the side of them, of which I have not lost a plant. Could you tell me the cause?—NORTH DEVON.

[Your case is an instance of the great care that is requisite when Vines, Peaches, &c., are grown in the same house. You may be thankful that the Grapes were almost ripe before the spider from the Peach trees commenced upon them, as that will prevent the flavour being much injured. You can now do little except in the way of palliatives, unless you resolve to go to the trouble of washing every leaf with soap and water, or such a decoction as you name of Gishurst compound.]

In the first case we would clear out all the Capsicums, syringe the back wall with Gishurst just high enough up to be sure that not a drop fell on the Vines. Then we would paint every open place on the north wall with a paint of soft soap, water, and flowers of sulphur, and shut up the house early in the afternoon when the sun was still brisk upon it. Then, if there are hot-water pipes, we would coat them over with sulphur and lime, and put a brisk fire on in the evening, and keep the house shut for several nights, giving air, however, early in the morning. These means will act as checks and palliatives.

If you try the second plan, it would be well to remove all unnecessary laterals, and then carefully sponge every leaf, without allowing a drop to touch the bunches. You must rely for completely getting rid of the enemy, on thorough cleaning after the Grapes are gathered and the Vines are pruned, such as syringing the whole house, glass, wood-work, and Vines with warm soap water, washing all with the same with a brush or cloth, not omitting the Vines, painting the latter with clay and sulphur, removing 2 or 3 inches of soil inside the house, watering with water at 160°, and fresh surfacing with new soil, after the walls, &c., have been limewashed. Then, at least the top of the back wall should be painted with sulphur.

In a dull day you could put a fire on and keep the house not quite close, but with only a little air on at the back. We can hardly hold out hopes of your being able to do more than keep the enemy in check until your crop is gathered.

To keep Filberts dwarf and in a good bearing state, you should treat them very much as you would a Gooseberry bush, as they generally bear best on short, stumpy young wood.

It is difficult to tell you why your *Calceolaria Kayi* keeps dying, whilst *amplexicaulis* keep well on. The free-flowering at the early part of the season might have exhausted the *Kayi*, and more especially if the roots had been at all cramped before turning them out. Some of our *Calceolarias* are also going, but that is solely owing to the drought; as though the stems have had three sprinklings from showers, the roots have had no moisture for more than two months, all the rain at any time not wetting the dusty earth more than the eighth of an inch deep. We presume that you have not had to complain of dryness, because *amplexicaulis* is the first to suffer from that; and we can suggest, therefore, no other cause but very free early blooming, early cramping of the roots, or a soil deficient in nutriment.]

GRUBS AT THE GREENS.—No. 2.

MANY thanks for your reply to my grubby question in last week's Journal, but as it is only a partial answer, the better half withheld, I humbly ask for the rest. The charge of "heresy" is a serious one against a clergyman, and "The Chaplain," to boot; so that the sooner I recant the better, as it appears that upon the knowledge of the scientific name depends a thorough cure. Pray what is it? Such an appellation does not resemble Butler's account of

"A rhetorician's rules,
Which serve him but to name his tools."

As even troublesome insects refuse to die unless learned cognomens are given to them.

This reminds me of an anecdote of a physician who wrote a prescription (oh, the heretic!) in plain English. The patient died. The apothecary declared that "of course Mr. Dash died, as the doctor did not write his prescription in Latin." Vulgar "Leather-coat" shall die by an old dinner-knife, but in his prior scientific stage he shall die by whatever sprinkling process you kindly state. I ask on public as well as private grounds, for if next year the grubs increase, the family grub in many a house will painfully decrease. The benefits of a right belief are always great, so I am no longer a heretic, but in this, as on every other point, an orthodox—WILTSHIRE RECTOR.

P.S.—I fear I do not always write plainly, thus I wrote in my last contribution on this subject, "fat yellowish green grub," not *fat*.

[Our indignation is calmed, and we shall at once surprise our correspondent by informing him that the parent of his grubby marauders is no other than the "Daddy Long-Legs, *Tipula pratensis*. The females are now depositing their eggs in the soil, and this is prevented by sprinkling a mixture of soot and gas-lime over the surface of the ground where Cabbageworts or Lettuces are to be planted.]

THE TRIAL BEDDING PLANTS AT CHISWICK.

SOME time ago there appeared in your Journal some very clever little articles on mechanics as applied to gardening purposes. I forget whether there was an article on the wedge, but if not it was certainly an omission; and I am going now to show you what a useful instrument the wedge is, especially the thin end of it.

In the "Proceedings" of the Royal Horticultural Society for August, September, and October, 1864, there appeared this notice—"Show of Trial Flowering Plants and Fruits at Chiswick, with promenade." Very attractive information to me, particularly as a certain garden ghost some months ago had hinted the difficulty of arriving at a satisfactory knowledge of the vast numbers of bedding plants alluded to by your correspondents, and advertised in your columns.

At Chiswick I arrived after a very hazardous journey by rail from London, and a dreadfully hot walk from the station to the Gardens. Do you know what a sell is? If ever a poor parson was sold, I was on that same Saturday the 27th of August, 1864. "Trial beds!" Now we shall see these *Geraniums*, *Verbenas*, &c. "Where are they?" "There

they are, sir." "What! those little beds with five plants only to each?" "Yes, sir." "And how long have they been planted?" "About five weeks." "But there is no bloom, and some of the beds are not half filled!" "Only five plants of each kind allowed, sir." There was the Roi d'Italie, pretty little Lady Cowper, and coquettish Waltham Pet, a Velvet Cushion, my old friend Lord Palmerston, and defiant Stella. "But how bad you do look all of you! What's the matter?" No answer came; but when I returned home my ghost, a little after dark, whispered consolation, "Never mind, you have got the thin end of the wedge in."—F. W. ADER, *The Cell*.

HEATING A GREENHOUSE.

I HAVE a greenhouse 24 feet long, 12 feet wide, span-roof, running from south to north. I am about to erect a Cucumber and propagating-house 12 feet square, to join my greenhouse at the north end, and I shall be obliged if you will answer the following questions about heating it.

1st. Will a conical boiler without brickwork answer the same purpose as a saddle boiler?

2nd. Will a round four-inch pipe answer the same purpose as an open one for bottom heat?

3rd. Will a flow and return pipe almost in the centre of my greenhouse be sufficient to keep the frost out? The above to work from the Cucumber-house.—W. F. W., *Norfolk*.

[1. The conical boiler without brickwork will answer the same purpose as respects heating as a saddle-back with brickwork, perhaps more so; but in a Cucumber-house, if the boiler is inside of the house, it would be desirable to have the feeding aperture and ash-pit door outside, for reasons lately given in answers to correspondents. If the boiler is to be fed inside great care must be used in lighting and clearing away ashes. As respects the latter, if sufficiently wetted there need be no difficulty. If the boiler stands outside of the house there will be loss of heat from its sides, but this might be prevented in a great measure by a wooden case slipped over it, at say 9 or 12 inches distance, the inside of the case being made of a white colour by painting or lime wash.

2. The round four-inch pipe will answer the same purpose for bottom heat as an open one; and if the heat is drier than you like, you can easily make it as moist as desirable, either by evaporating-pans, or throwing water among the clinkers, &c., in which the pipes are packed.

3. A flow and return pipe along the centre of the greenhouse will be effectual in keeping out frost just in proportion to the height of the house and the surface of glass exposed. If the ridge is above 8 or 9 feet from the floor, the sides of the house would scarcely be safe in severe frost, unless means were taken to secure a brisk motion of the internal air. As the pipes are to come from the Cucumber-house at the north end of the span, we would prefer you taking a pipe all round except at that end, placing the pipe not more than 15 inches from the side walls. If the house is lofty, and you have glass at the sides as well as the roof, this would be barely sufficient to keep out severe frost. But for the first expense we would advise more piping, as fuel is saved, and the health of the plants better secured, by never having the pipes very hot.—E. F.]

REPOTTING PEACH TREES.

THE best time for potting Peach trees is as soon as the fruit is gathered—i. e., if the roots are in a healthy condition and growing in suitable soil, in which case do not disturb the old ball, but merely use a larger-sized pot, and make the fresh soil pretty solid with a blunt stick. If the roots are not in a good state defer the potting till the tree shows signs of shedding its foliage, then shake the roots free from the old earth, and repot the plants in more suitable soil. Never repot all your trees in one year, as there is always a slight risk of losing the crop of fruit the year following. Peaches appear to bear better when the pots are filled with roots. Potted early, the risk is very small, as the trees at once make fresh roots. After the fruit is set, and as big as horse

beans, take two parts of horse-droppings and one of malt dust, and place an inch or two of the mixture on the surface of the soil, and renew it when the fruit is half grown. When the malt dust is mixed with manure it should be used at once, as if it remains in a heap it quickly ferments, and produces a very disagreeable smell.

[The above is in answer to the queries of a correspondent whose letter has been mislaid.]

FOUR DEGREES OF FROST, AUGUST 25TH.

SUCH is a fact! In the morning everything out of doors had the appearance of a winter's morning. Many plants were frozen hard and stiff. The Dahlias are black and quite done for. Dwarf Kidney Beans and Scarlet Runners are very much cut up, but not quite killed. The Perilla has suffered much, and Love-lies-bleeding is very much injured. The Perilla is certainly the tenderest of our bedding plants, as ours was very much disfigured by the frost we had here on the 1st of June—viz., 4°. The wind has been north for some days past.

On the 24th the thermometer was down to freezing-point, and on the 25th 4° below it, on the 26th 1° below. It is now, about 7 p.m., the 27th, and there is every appearance of a sharp frost to night.

Has any weather prophet foretold this frost, or the weather in general of the past summer? Everything here is suffering, especially the pastures, far want of rain. We have been obliged to water thousands of Rhododendrons to keep them alive, or many must have died. I am told that Potatoes that were healthy and green before the frost are now black and laying down flat. I never saw nor heard of such a frost in the month of August before.—HENRY COOMES, *The Gardens, Chetwynd Park, Newport, Shropshire*.

P.S.—I have waited till this morning's post to report upon the night's frost, and I find the thermometer indicates 4°. Last night I covered our Asaleas to protect them, as they showed the effects of the previous frost at the points of the shoots.—H. C., *August 27th*.

On the morning of the 25th, the thermometer in the neighbourhood of London indicated 2° below freezing; and at Malton, in Yorkshire, we learn from the *Times* that there was ice the thickness of paper on three mornings of the same week, and that Dahlias were frost-bitten in low situations.

LESSONS TAUGHT BY THE PRESENT DRY SEASON.

FROM the present dry season may be drawn some useful lessons, and the value of these will be greatly enhanced if they are carefully noted now and acted upon judiciously hereafter.

I am the more desirous to draw the attention of your readers to this subject, because I have noticed in various places some of the finest displays this season that the eye could rest upon, although this is a year of marked and unusual dryness. This, then, must be one useful lesson which will serve to teach us that, in spite of a scorching sun by day and a frosty air at night, there are ways and means to secure a floral display.

We shall gain another point by considering how this is brought about, and it is chiefly by a good supply of water about twice a-week—not a mere dribbling from the rose of a water-pot, or a gentle bath from the hydropult, but a thorough wetting through the soil to at least the depth of 6 or 8 inches. How this is to be accomplished may be learned at Kew or Hampton Court. There the beds are not raised, but, on the contrary, instead of sloping from the centre to the outside, they rather slope to the centre, but only just sufficiently to secure every drop of water which falls upon the bed from being wasted. I am aware that an objection can be raised to this form of a bed in a retentive soil should a wet season set in, but this is to be immediately overruled by what ought to be a general practice—namely, deep trenching, the effect of which has never been so clearly demonstrated as in the present season.

As all have not had an opportunity of seeing the effect of this year's drought upon those public gardens, it is with pleasure that I record my humble testimony of the splendid condition of the gardens at the Crystal Palace, at Kew, and at Hampton Court. Their condition demonstrates the ability of those upon whom the management devolves.

One more lesson to be learned there I will bring under notice, and that is the absence with one exception (Purple King), of the Verbena as a bedding plant. I must not be understood to say that it is altogether banished from the flower garden, but a visitor at the Crystal Palace or at Kew cannot fail to notice that it is not so much used there as in times gone by. With me the Verbena is an especial favourite, therefore it must not be inferred that I make this comment purposely to lower it in the estimation of others; but my own observations justify me in saying, that near the metropolis the Verbena is often a failure, and as too many to their sorrow will tell us, it is usually so infested with thrips that it is more often than a source of much disappointment.—J. C. CLARKE, Wimbledon.

BEDDING GERANIUMS.

(Continued from page 167.)

THE modes of managing bedding Geraniums being endless, I shall only treat of one more, and that is how to dispense with potting in the spring treatment of autumn-struck cuttings. With this object in view they should remain in the cutting-boxes until the beginning or middle of April, and a pit or frame filled with ashes or any kind of rough material to within 1 foot of the glass, or, failing that, a turf pit to be covered with some old lights, should be in readiness to receive the plants. We then provide, or rather have at hand before we require it, some sphagnum, but if that cannot be procured, the moss found abundantly in some woods will answer admirably. Having a heap of compost before us, another of sphagnum or moss on one side, the box containing the plants on the other, and some matting cut into two-foot lengths, wetted, and hung up in a convenient place so as to be easily reached, we then take a lump of moss, draw it out so as to be the width of both hands every way, and lay it on the potting-bench on a piece of the matting. We next place a little soil on the moss, and then, having taken the plant out of the box, place it exactly in the centre of the moss bed, and put a little more soil round it. We then close the moss neatly round it, and bring the strip of matting over the top, by the stem of the plant, down again under the ball, I will call it, and up again, twisting and turning it about until both ends are just long enough to tie, when we fasten them with a knot that will draw the closer the more the moss swells after watering. We have then a Geranium wrapped in a moss coat, just as nursery-men wrap the roots of their choice shrubs for travelling, with this difference, that we put a little soil within the parcel in addition to that adhering to the roots.

Each plant when mossed is placed in a riddle, and when this is filled the whole are taken to a frame, or pit, and we pack them closely together, and spread about half an inch of fine soil over the moss between the plants. In this way we go on, watering them after the surfacing of soil till we have the frame full.

After the plants are placed in the pit nothing is required but to keep the frame close for ten days, protecting from sun by day and frost by night, and afterwards to give abundance of light, air, and water when necessary, with frequent sprinklings overhead. By the last week in May or first week in June they will be all that can be desired, the moss being one mass of white roots, and they may then be planted in the beds. The matting is, of course, rotten by this time, yet the plants move with a splendid ball, and the roots are not matted by running against the inside of a pot but present innumerable mouths ready to lay hold of the new soil without deviating to the right or left, whilst the roots of plants under pot treatment have to change their course, which they sometimes do tardily, as the sickly foliage too plainly testifies.

As to old plants, which are preferable to young, from their blooming earlier, besides being larger and more generally effective, I will now offer a few remarks on preserving them through the winter.

Most of us desire to prolong the beauty of the flower garden to the latest possible period; but care should be taken lest this be not overdone, especially when the plants employed are required for another year's ornamentation. Sooner or later in October we must prepare for frost; but as no set time can be given, it is better to take up the plants a few days too soon than wait until they are hung with crystal drops, and their fleshy leaves have a glassy aspect. It is too late then, for, cover them as you please, the stems will rot when placed in heat. The plants may, it is true, be saved for a time by being protected at night by hoops and mats, or canvass, taking off the covering during the day; but to do well they should be taken up and potted, or otherwise placed in safety, before the occurrence of frosts of sufficient intensity to injure them. I have found on a mean of the last two decades, that the 10th of October is the latest period at which Geraniums can be trusted outside with safety.

Presuming the plants to be planted out in the bed, we take them up with as much root as possible, not that a large root is desired, but when taken up carelessly we are apt to split the stem leaving a ragged fracture which admits wet, ending in the decay of the stem and the loss of the plant. It is also undesirable to split the top by careless and rough handling, for being very succulent the branches are easily split off at the points where they spring from the stem. In short, care should be taken to injure them as little as possible. Choose a dry day for taking up, and this done and all being in readiness for potting, we have to distinguish between variegated, tender, and rather small-growing kinds, and those of strong and vigorous habit. After this, we trim the roots in the first instance, cutting them in with a sharp knife so that a year-old plant may pass easily into a 32-sized pot if a small grower, or into a 24 if strong, proportioning the size to the size of the plant. The roots of all may be cut in to within 3 inches of the root-stem for plants that are not required large; but where large plants are desired it is not necessary to reduce the roots so much, but to proportion the reduction of the root to the size of the pot which the plant requires. After reducing the roots, which must be done in proportion to the size of the head to be left, it becomes necessary to cut in the latter. This is done by removing the old shoots and thinning out those remaining, so that they may stand clear of one another. We take away the old branches because they seldom put out a profusion of shoots, and those which are produced by them are weak, and as such undesirable. The young shoots left, on the other hand, produce numerous shoots, and for that reason are preferable to old shoots. They, therefore, require the same treatment as to cutting-in as Pelargoniums after blooming, distributing the shoots, and shortening them so that an even-headed or well-shapen plant may be produced in the following season. The shoots left, having been cut-in to within 3 or 4 inches of the old stem, will have few if any leaves upon them, but this is of no moment (though I confess that I like them with a few leaves); and the plants should then be potted in any light good loam with a little sand intermixed. The soil should be in a moderately moist condition in order to obviate the necessity of giving water for some time. They are then to be placed in a house from which frost and damp are excluded, it being immaterial whether they are in the light or dark for a month or six weeks, by which time they will have pushed and will require light and water to sustain their vitality. Probably the young shoots will have a blanched appearance, but they will become green on exposure to light. During winter the plants will merely require frost to be excluded, and but little water will be needed. In February or March they will be growing freely, and must have more water; and in April if room can be spared, they may be potted, and afterwards treated the same as the cuttings potted in the spring. This treatment, it must be borne in mind, is only suitable for the stronger-growing Scarlets or others of free growth; most of the Variegated, and some of the less vigorous kinds, requiring a different mode of treatment, which I shall notice presently.

Some think potting old plants in autumn a waste of room, considering it merely necessary to pack them closely in poor earth in boxes, cutting away all the leaves and the large disproportionate heads, without reducing the roots

so much as for potted plants. Some place the boxes so filled with plants under shelves and stages in houses, or in cellars, and sometimes, but rarely, in houses where light and air can be afforded. When placed under stages one-half the plants perish by the drip of the plants above them. They are liable to wither in a dry cellar, and to damp-off in a wet one; and boxes in a house of any kind, unless made neatly and well painted, are eyesores. I have hitherto considered that there are conveniences at hand to do without these makeshifts, and that any one interested in a garden can derive pleasure from seeing the places where the supply of plants is kept to furnish the flower garden in summer.—G. ABBEY.

(To be continued.)

CULTIVATION OF THE MELON.

(Continued from page 153.)

HEATING by means of hot-water tanks is an admirable means of supplying bottom heat to Melons. Fig. 9 is the

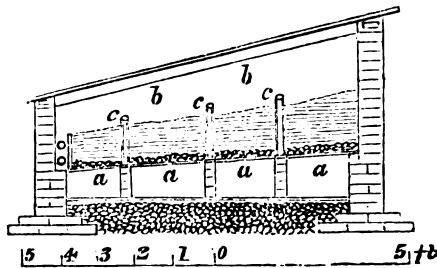
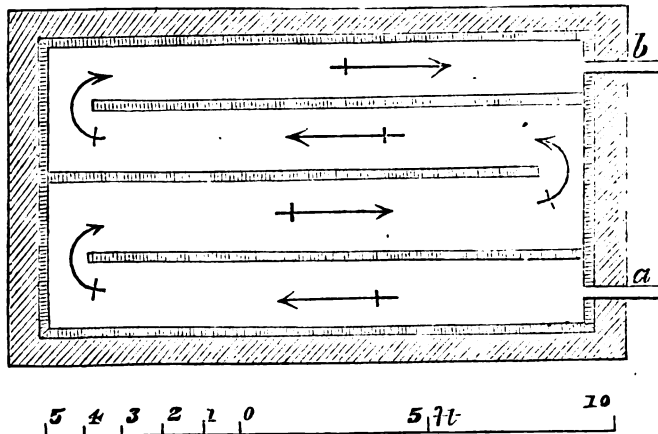


Fig. 9.

section of a pit well adapted for the Melon or Cucumber. *a, a, a,* Are compartments of a cemented tank containing about 6 inches deep of water, separated from each other by cemented brick walls one brick thick. This tank is covered with slates, which are laid without mortar on the division and side walls of the pit. Where there is a rather large hole between the slates advantage is taken to place an ordinary three-inch drain-pipe with one end over it, or a still better plan is to place these drain-tiles over holes made by taking the corner off a slate where it rests on the division-wall, and 2 feet apart. A few inches of rubble placed on the slates, and a sod grass side downwards upon it, will prevent soil getting down to openings between the slates; and whilst allowing the superfluous water of the soil to pass away, will also prevent the steam from the tank rising too much through the rubble into the soil, and making it sour or sodden, at the same time the advantages of a moist bottom heat are secured. The drain-pipes standing on end pass through the soil into the above space, *b, b,* and through



Plan A:

them rises a nice moist heat, which can readily be kept down by placing a flat piece of slate over the ends of the pipes, *c, c, c.* In addition to the heat ascending by the drain-pipes, top heat is furnished by two four-inch hot-water pipes in

front. The ground plan, *A,* shows the circulation of the water, which enters the tank at *a,* and makes its exit for the boiler at *b.*

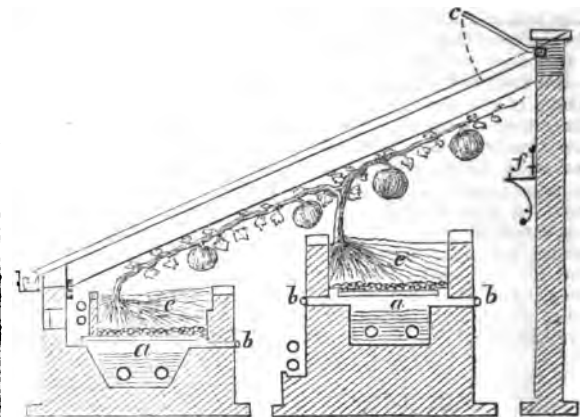


Fig. 10.

Fig. 10 is a lean-to house about 12 feet wide inside. The pipes for bottom heat are in a tank, *a, a,* which is about three parts full of water. The tank is covered with flags or slates, but so placed that an opening 2 inches wide is left between them and the walls on which they rest. This allows the steam to rise; and openings being left, or a piece of 1½-inch pipe let through the walls of the pits, one end communicating with the tank and the other with the house, the atmosphere can be made moist, and when not wanted the pipe may be covered with a cap at *b, b, b.* A moist heat and an increased temperature is therefore obtained. The house is ventilated at top, *c,* and in front by means of boards hung in the centre, and which can be opened much or little at pleasure. The air entering there is warmed by the hot-water pipes before it reaches the plants. *e, e,* Are spaces for soil over the tanks. There are two pits and two sets of plants as shown, one occupying the half of the house in front, and the other the upper part, and there is a shelf for plants at the back, *f.*

Fig. 11 is a section of a pit useful for growing almost any kind of plant. Like the preceding, the pipes for bottom heat are in a tank of water, *a;* but they might be kept dry in a chamber, or be surrounded with rubble. In front is an open cavity in the wall, and by means of a wooden ventilator air is admitted at *b,* becoming heated before it reaches the plants. The small lights are made to open by lifting

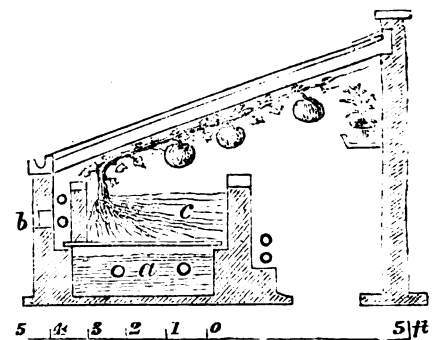


Fig. 11.

up with a crank, &c. There is space for soil at *c* over the tank, a shelf at back for plants, and a walk at back for convenience. The Melons are trained to a trellis.—G. ABBEY.

(To be continued.)

AN ELEGANT MULCHING FOR ROSES.

In a full south aspect in front of my house I have several choice Roses, which are trained on wirework (galvanised). Notwithstanding copious and continued waterings, they have all suffered from the extreme heat of the sun, except two, which had the Musk plant growing on the surface of the soil. This appears to have acted as a most beneficial mulching; in the watering given to the Roses the Musk has luxuriated, and the Roses have remained free from the attacks of the aphid or red spider, and rewarded me with rich blooms, while their companions unmusked have struggled unsuccessfully with their insect enemies, and have disfigured rather than ornamented the front of my house.—T. S.

[Is the smell of Musk offensive to insects?]

PACKING ORCHIDS FOR IMPORTATION.

CAN any of your correspondents, who are in the habit of importing Orchids, inform me what is the best mode of packing the *Aerides*, *Vandas*, &c., from India, in closed cases. A friend offers to collect for me, but glazed or Wardian cases are not available. If packed in charcoal dust would they not do well?—ORCHIDOPHILUS.

[Knowing several parties who are desirous of the same information, we insert this inquiry prominently, and shall be obliged by any information on the subject.—EDS. J. or H.]

WORK FOR THE WEEK.

KITCHEN GARDEN.

SUCH ground as is now becoming vacant should be trenched-up as roughly as possible, manure being applied if necessary. This should always be done as soon as the crops are off, whether the ground is wanted again immediately or not, as it is an absolute loss of fertilising properties to allow it to lie untended. Gravel walks must come in now and then for a share of attention in weeding, rolling, &c. *Cabbage*, plant the principal crop of spring Cabbage on ground well manured as previously directed. The East Ham is a good variety for standing over the winter, it is not so apt to run in spring as most others. Prick out into beds a few inches apart, a large quantity of Cabbage plants which have just expanded their first two rough leaves. They will be required in spring. *Cauliflowers*, young seedlings must not be allowed to stand too thick in the seed-bed. The thinnings may be pricked out thinly, and they will make good stocky plants. The watering of *Cauliflowers*, *Broccoli*, and *Celery* must be diligently followed up, for it was never more necessary; near London we have not had a good soaking of rain for many months. Where deep trenching is practised its effect is very perceptible in the luxuriant growth of these vegetables. *Endive*, the July sowing may now be pricked out on a warm border, and as the early plantation attains a proper size the plants should be tied for blanching. *Lettuce*, make the last sowing for the season of *Brown Cos* and *Hardy Green* on raised beds of light soil, where they may remain till spring and be planted out to succeed those that are transplanted this autumn under walls and similar situations. *Scarlet Runners*, the large pods should be picked clean. These often give over bearing prematurely through the exhaustion occasioned by suffering the pods to go to seed. *Spinach*, see that it is properly thinned and the surface stirred.

FRUIT GARDEN.

Fig trees out of doors should be liberally supplied with water, if no rain falls, to enable them to swell off the late fruit. Give a final nailing to all wall trees, that there may be nothing to obstruct the perfect maturation of the wood. Vines out of doors should have every shoot of useless wood removed, and the branches laid in close to the wall. It is a somewhat nice point to know when to gather the respective fruits, some being best at one stage of the ripening process, and some at another. As a general rule fruits of a precocious character and which ripen rather rapidly, and those also possessing some aroma, should be gathered somewhat under-ripe; whilst those which ripen with difficulty, which are long

in colouring, or which are scentless should remain much longer on the trees.

FLOWER GARDEN.

Neapolitan Violets which were parted and planted out in spring should now be carefully taken up with good balls and removed to a frame or pit for flowering during winter. The soil most suitable for them is well rotted turf; but sweepings of roads or any light soil will answer. Sweet Peas, Dahlias, and other plants requiring tying up should now be attended to before they are destroyed by winds. Climbers on walls should again be pruned and nailed if they require it. Mow, sweep, and clean grass lawns: hoe and rake borders during this fine weather, and destroy all weeds before rainy weather sets in. Still continue to propagate showy and choice herbaceous plants by cuttings and division of the roots, and seedlings of late-sown perennials may still be pricked out with advantage. Pot off a goodly number of the different varieties of Brompton, Giant, Queen and Intermediate Stocks. Continue to plant out Pinks, Glove Carnations, and rooted cuttings of hardy herbaceous plants into nursery-beds. See that plants already established in beds are kept in a state of health and vigour by stirring the surface of the soil. Look now and then at the late-budded Roses and loosen the ligatures. *Chrysanthemums* out of doors should be carefully staked; if against a wall, where they thrive better, they should be trained while the succulent shoots will bend. Put in three or four cuttings in a 48-sized pot for blooming late.

STOVE.

Winter-flowering things should now receive extra attention, as also those succession flowers which have been retarded. Nothing but a light situation will be suitable after this period. Those who are compelled to grow such stock in the shade of late vineries or other forcing-houses must rest contented to endure a partial failure. Let the *Begonia* family be duly estimated in this respect. The *Euphorbia jacquiniiflora*, if propagated early and frequently pinched back, will now be dense bushes. They look best three in a pot. Of course, such plants as the winter *Gesneras*, *Achimenes*, &c., will not be forgotten.

GREENHOUSE AND CONSERVATORY.

Although many persons may hesitate in the work of introducing the house plants while the promise of a late summer is before them, nevertheless it is dangerous to trust anything to the weather at this period of the year. Cloudless days are very delightful, but it not unfrequently happens that they are succeeded by clear nipping frosts at night: therefore the work of taking in plants should proceed uninterruptedly. Let the condition of each be examined, and defects in the soil or drainage of the pots be at once remedied. Clear off moss, remove insects, and replace stakes. The ordinary precautions for obtaining a supply of common flowering plants throughout the winter months should be progressively continued, *Mignonette* sown, *Hyacinths*, *Tulips*, and other bulbs potted and plunged—about equal portions of good loam and decayed leaf mould, with silver sand, will be the best soil for these if for forcing; but well-decomposed cowdung must be substituted for the leaf soil when the bulbs are intended for late flowering. After potting them, place them on a dry bottom, and cover the pots 2 or 3 inches deep with old tan or ashes, preserving them at the same time as much as possible from heavy rains. Under this treatment they will fill their pots with roots, and be in readiness for forcing when wanted. Pinks for forcing must be encouraged, and *Cinerarias* duly attended to. Roses in pots should occupy a fair share of attention. Young plants may yet receive a shift, and manure water may be applied to plants in activity. Where valuable stove plants have to be kept in the conservatory while in bloom, they will require careful management to prevent their being injured by damp; and they must not be overwatered at the root, as stove plants are soon injured in a low temperature if kept too wet. Give air freely on bright days, but if the house contains many stove plants it will be advisable to shut up early in the afternoon, so as to retain a little warmth for the night, and in the event of wet cloudy weather setting in, it will probably be found necessary to use a little fire heat to dispel damp and preserve blossoms of tender things, and this should be seen to before handsome specimens are disfigured

or ruined for the season. Keep everything as clean and neat as possible, removing decayed leaves and flowers, &c., immediately they are perceived.

FITS AND FRAMES.

If previous directions have been attended to, the propagation of next season's bedding stock will by this time be well advanced, and where, from the pressure of other work or any cause, this is not the case, every possible dispatch must be used while the weather is favourable for such work. Continue to put in cuttings of new and scarce plants. A close frame without artificial heat will answer to keep them in at present.

W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

REMOVED the dried-up haulm of Peas and Beans, unless where we wished them to remain as a shade to undercrops. We have had a skiff of a shower or two on Wednesday which refreshed the foliage, but did nothing to moisten the ground. We have trenched-up a piece where Peas had been grown, and though stiff soil we found it very dry for 18 inches in depth. We have turned out lots of winter stuff with balls, giving a little sewage water round each plant, and then firming well and covering with the dry earth. They will have the chance of rains, and must be watered when we can obtain it. It is difficult to make people attend to these little matters even as respects planting. The above mode costs a little more trouble than putting the plants in in the usual way, and then soaking them well from the surface, but a pint of water would do more good in the one case than three pints in the other. In the first case, the moisture is retained immediately about the roots and the soil is not cooled by evaporation. In the second case, the plants are checked by a diminished temperature, and the water you give soon mounts up into the arid atmosphere. Planted Lettuces, Endive, &c., in a similar way. Pricked out the most forward Cabbages for the winter that they may be lifted and turned out with balls as soon as the ground is ready. Watered a succession-sowing in the seed-leaf, strewed them with ashes, and shaded to keep out the heat. We are glad we planted a lot of Lettuces close to the foot of the north side of a wall. They are succeeding those under the shade of Apple trees. Unable as we have been to water, none but sown Lettuces could stand any time in the open garden.

Raised and spread out a portion of the Onion crop—a good crop notwithstanding the drought. We hear much said about housing them securely. If kept dry they will stand any amount of cold. We have never seen them keep better than when tied up in strings and hung up in an open shed. No frost seemed to injure them so long as they were kept dry; but if rain or snow blew in on them and melted, and a sudden frost came, they were apt to be a little injured. We often wish we could use them with impunity, but the use of one will taint all our wearing apparel for a week. We have known several very strong old men who attributed their strength after they had seen seventy years and done much hard work, to the free use of Onions. We have seen some of these men slice off raw, with the greatest gusto, some three or four large Onions along with their bread and cold pork for dinner, and declare it was a dinner fit for a Prince. As for that, we have no doubt that the hungry ploughboy who, swinging on a gate, slices off his cold bacon and bread, whilst his team are having their lunch, eats with a relish that the rich man rarely enjoys when partaking of the most richly-seasoned dishes. We have long been convinced that a good hot raw Onion is a capital thing for labourers who work out of doors, and who rarely have a good hot dinner. Good people should think of that before they show that they are annoyed by the Onion odour which generally accompanies their use. We have known cottagers troubled as to where they could house their Onions. Let them be assured that all that is wanted is to keep them dry, then no frost will injure them.

From *Celery* we removed the shading of branches, and we are surprised how well, on the whole, it has done without watering—not a great deal behind some good *Celery* we lately saw that had been soaked once a week. We cleaned

all that had been put out—pretty well enough for our use—by removing every bit of sucker, and then placing a little earth close to the stem. We are behind our usual time in earthing-up, and have only done a part of one bed. Our kind, the White Ipoomparable, if each head is tied after clearing away the suckers, needs but little earthing-up. We have a small bed, thick together, well blanched for soups, and for an occasional bit of cheese; but good heads will need something like three weeks. But for scarcity of water we would have had it in the beginning of this month, or much earlier. We have just managed to give our four large beds a fair watering with sewage, keeping it off the leaves, and will follow with about an inch of fine soil to keep the moisture in. It will soon fly off through the foliage, however, and that will necessitate shading, if the heavens do not give us a good watering. We will plant out a little more with good balls so soon as dripping weather comes. For want of wet, though we gave a little water to the drills before sowing, we seem to wait a long time for Spinach and Turnips coming up.

No weather could be better for hoeing, to keep the surface open, and to kill all sorts of weeds. We use the words "all sorts" advisedly; for, if not all, the greater portion of the worst weeds—those worst to conquer—may be thoroughly eradicated by a persistent use of the Dutch hoe. "At them, always at them!" however, must be the motto. Keep this motto in view, and many weeds whose roots are difficult to eradicate will succumb, the roots decaying when the top is prevented giving them the benefit of any reciprocal action. We have proved repeatedly that Nettles may be destroyed, not by digging up their roots, but by continually cutting off the tops when not more than an inch or two in height.

There can be no worse weed to destroy than the large white-flowering Bindweed, that soon threads the ground with its cart-ropelike underground stems, and the smallest portion of which will grow. We once had a corner thoroughly overgrown with it. Take up a spadeful of earth, and there would be fully half a spadeful of these roots, called here by a term anything but pleasant to ears polite. We let it alone for a bit, then used a scythe over it, removed what was cut to the burning-heap, placed a foot of short grass over all, and let it remain six weeks. On digging it up in the winter not a root was visible, though openings in the soil, of the size of tobacco-pipe stalks, told clearly where they had been. There were some Roses and other plants round this corner, and there enough was left for a future stock.

The above was a summary way of eradicating this troublesome customer, which from occupying a foot would soon if left alone occupy a whole garden. We have several times proved that this intruder can be equally successfully disposed of, if there is constant war between it and the Dutch hoe—that is, if it is cut, and cut, and cut again as soon as it puts out a modest shoot of from 1 to 2 inches in length. This cutting continually at the top seems thoroughly to paralyse and kill the large roots, full of vitality as they otherwise are.

We lately saw a fine old garden in this neighbourhood, and not a vestige of this weed to be seen anywhere in its seven acres. We knew that for years the garden was overrun with it, for it had been pretty well left to take care of itself, as all the keeping it had was merely a pretence, owing to a deficiency of labour power, though the man who superintended it wrought so hard from "early morn to dewy eve," that when one shook hands with him you might well fancy you held a rough iron file in yours. Well, we are glad to see that the fine old place looks now as if it meant to take its right position; but among all the improvements wrought by the present superintendent, nothing pleased us more than the seeming absence of this pest, which threatened to monopolise the whole place. The good man and accomplished gardener did not mind telling us as a secret how he conquered this enemy, forgetting, no doubt, our inability to keep anything of the sort; and the pith of the secret, and consequent remedy, was just this—keep cutting it up with the hoe whenever it shows itself above ground; if the weather is sunny all the better. This quite corresponds with what we, too, have experienced, and numbers may be thankful to know that this pest, the *Convolvulus sepium* of Willdenow, we believe, and the *Calystegia sepium* of other authors, may be quite destroyed, and by a less troublesome

process than digging and forking over and over to discover every bit of its white stringy roots.

We have not quite the same amount of experience with another trailing, flesh or pink-flowering little Bindweed—the *Convolvulus arvensis*, which produces long knotted roots; but from what little we have tried we feel convinced that, too, could be eradicated by constantly cutting off the top as soon as it appears above the ground. This seems to grow more rapidly after cutting than the large-flowering white *Convolvulus* above referred to, and to delight as much in dry loose soils as the white strong-growing one does in soils that are moist, close, and rich.

The continuous cutting of this trailing *Convolvulus arvensis* is of all the more importance, as the smaller roots are traced with more difficulty than the larger white roots of *Sepium*. The latter, though ruinous to a gardener, is a beautiful object with its snow-white blossoms on wild hedges and woodland scenery when in company of the Clematis and Honeysuckle, and some authors say that the roots may be used instead of scammony, as a stimulating cathartic. The less we see of such a plant in the garden, however, it will be the better for us. Some years ago we were presented with a hardy kind with white flowers as large as a saucer, and beautiful it looked; but though placed against a wall, and the root confined to a large pot, the shoots soon layered themselves, made bushels of large roots, larger than *Sepium*, and threatened to monopolise the whole wall and border, until we saw the necessity of destroying it, or carefully watching it.

Gathered a nice lot of ripe Tomatoes that had been trained against the back wall of an earth-pit. Ridge Cucumbers and Gherkins were planted in front of them, and after having gathered a number for pickling we were forced to let the leaves of the Cucumbers become like tinder for want of the ability to water them. Most of our Vegetable Marrows are going off from the same cause, though it is no great loss, as, after this month, they are rather cold matters to have much to do with, unless treated something in the way that flint soup must be to make it at all agreeable. Gathered also a lot of ripe *Chilis* and *Capsicums* for Cayenne. We used to wonder how *Chilis* were most in request for that purpose, as, so far as strength is concerned, there seems little difference between them and the generality of *Capsicums*. We think, however, the reason may be that, bulk for bulk, there is more outside skin in the *Chilis* than in the generality of *Capsicums*, and also that on the whole it is firmer. In most private establishments we believe that the Cayenne is made from the skins dried and pounded. We think that the seeds are hotter and stronger than the outside covering; but they are seldom used, or other colours of *Capsicums* except the red, as that would interfere with the red colour of the Cayenne. Why should not all be ground together, or the seeds and their outer integument kept separate? So long as Cayenne must be red there will be adulterations, just as pickles must be green, and, therefore, to a certain extent poisoned. The purchaser in such matters is pretty well as much to blame as the manufacturer, who makes to sell, and therefore must please the tastes and even the prejudices of the buyers. Would some friend tell us if there is any reason, except colour, why the seeds of the *Capsicum* tribe should not be ground into pepper?

Owing to a press of other matters and a scarcity of material, we deferred from day to day, and, therefore, rather long, making up a piece of a Mushroom-bed in our open shed. To make the matter worse, we mixed rather more of fresh droppings with some old dung than we ought to have done when haste was the object, as the mixture heated too much to enable us to spawn it quickly. In all such matters instead of mixing, it is better when quick work is wanted, to build in separate layers if old and new must be used. A fine heat may be obtained and lasting from using old and new tan in layers; but an excessive and fiery heat may easily be had from mixing them together, a matter of some importance to those who use tan for bottom heat. Owing to the reasons stated above, we were some three weeks without Mushrooms, but as our superintendent of the kitchen had preserved some buttons the want was not much felt. The first piece has now for some weeks been in excellent bearing, and the Mushrooms are firm and fleshy, independently of the heat, which we attribute to the shady place and a free current of air over the bed. The second piece is spawned,

earthed, beaten down, and a little hay sprinkled over it to prevent its cracking, and we have just put in dung for a small third piece, the droppings being rather fresh and mixed with turfy soil. We have also made a good number of bricks for spawn, as described last season, and set it in an airy place to dry before spawning. The bricks this year are only about 1½ inch thick, as we found such better every way as respects finishing than thicker ones. These we will spawn when dry enough. Previously Mushrooms were such an everyday affair that we made a good deal if not the most of our spawn; but for a few beds it will always be best to purchase from one of the commercial establishments which pride themselves on sending out a first-rate article. No doubt the spawn is often blamed, and the materials are blamed when the blame ought to rest chiefly on our inattention. Whatever the materials are, it is our part to vary our treatment according as we find them; and at their earliest stages Mushroom-beds need looking at once or twice a day to see that all is right. Trial sticks are easily felt, and there should be plenty of them.

Our Mushroom-house we have had all cleared out, leaving no woodlice if we could help it. Then two days running we burnt sulphur in the house, so that by shutting up every cranny no living thing would have the chance to survive. When the house had stood open a few days to get rid of the fumes of the sulphur, the walls, &c., were all limewashed, to fill up all holes and places of refuge, and when we can obtain some material during the month we will begin making our first bed. We previously stated that we found small beds in succession the best for a continuous supply when the material is at no time abundant.

Fruit and ornamental department much the same as in previous weeks.—E. F.

COVENT GARDEN MARKET.—SEPTEMBER 5.

The supply of out-door fruit is very plentiful, but the size is not equal to what it is in ordinary seasons. Of "rough" Apples and Pears, such as are hawked about the streets, immense quantities come in, and the prices realised are almost nominal. Importations of French Pears are likewise heavy. The best dessert Pears consist of Jargonelle, Williams's Bon Chrétien, D'Anjou, and Bosc d'Amanha, and Louise Bonne of Jersey. Of both home fruit, Grapes, Peaches, and Plums are abundant, but the supply of Fine Apples is shorter. Very good Figs are now coming in from Jersey. Kentish Cobs have made their appearance, and bid fair to be of good quality, judging from the samples which have arrived. They bring from 60s. to 65s. per 100 lbs. Good vegetables are very scarce, owing to the late drought, and realise high prices. The Potato market is heavy, and the quality is good.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples ½ sieve	1	0	2	0	Mulberries punnet	0	6	1	0
Apricots doz.	0	0	0	0	Nectarines doz.	2	0	6	0
Cherries lb.	0	0	0	0	Oranges 100	12	0	30	0
Currants, Red ½ sieve	0	0	0	0	Peaches doz.	4	0	10	0
Black do.	0	0	0	0	Pears (kitchen) bush.	0	0	0	0
Figs doz.	1	6	2	6	dessert doz.	2	0	2	0
Filberts & Nuts 100 lbs.	45	0	60	0	Pine Apples lb.	4	0	8	0
Gooseberries ½ sieve	0	0	0	0	Plums ½ sieve	2	0	5	0
Grapes, Hamburgs lb.	1	6	4	0	Quinces do.	0	0	0	0
Muscats 3	0	6	0	0	Raspberries lb.	0	0	0	0
Lemons 100	12	0	20	0	Strawberries punnet	0	0	0	0
Melons each	1	6	4	0	Walnuts bush.	14	0	20	0

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes each	0	4	0	0	Leeks bunch	0	4	0	0
Asparagus bundle	0	0	0	0	Lettuce score	1	6	2	0
Beans Broad ½ sieve	2	6	0	0	Mushrooms potale	1	6	2	0
Kidney ½ sieve	3	6	5	0	Musht. & Cress, punnet	0	2	0	0
Beet, Red doz.	1	0	2	0	Onions bunch	0	4	0	0
Broccoli bundle	1	0	1	0	pickling quart	0	6	0	0
Brussels Sprouts ½ sieve	0	0	0	0	Parley doz. bunches	4	0	5	0
Cabbage doz.	1	0	2	0	Parsnips doz.	0	9	1	0
Capsicums 100	3	0	5	0	Peas quart	1	0	1	0
Carrots bunch	0	5	0	0	 bushel	7	0	0	0
Cauliflower doz.	0	0	0	0	Potatoes bushel	2	6	4	0
Celery bundle	1	0	2	0	Radishes doz. bunches	0	0	0	0
Cucumbers each	0	6	1	0	Rhubarb bundle	0	0	0	0
pickling doz.	1	0	3	0	Savoy doz.	0	0	0	0
Endive score	1	3	2	6	Sea-Kale basket	0	0	0	0
Fennel bunch	0	2	0	0	Spinach sieve	0	6	0	0
Garlic and Shallots, lb.	0	8	0	0	Tomatoes doz.	1	0	2	0
Herbs bunch	0	3	0	0	Turnips bunch	4	0	0	0
Horseradish bundle	2	6	6	0	Vegetable Marrows doz.	2	0	2	0

TRADE CATALOGUES RECEIVED.

Sutton & Sons, Reading.—Autumn Catalogue of Imported Flower Roots, Geraniums, Carnations, Fruit Trees, and Seeds for Early Sowing.

E. Verdier, fils aîné, Horticulteur, 3 Rue Dunois, Boulevard, de la Gare d'Ivry, Paris.—*Trade Catalogue of Gladioli and other Bulbs.*—*Trade Catalogue of Tree and Herbaceous Pæonies, &c.*

TO CORRESPONDENTS.

* * Many questions must remain unanswered until next week.

EMIGRATION TO NEW ZEALAND.—"E. W." would be obliged by any information relative to emigration to New Zealand, and especially whether it is desirable for a gardener.

LOW WAGES (S. R., Kent).—Gardeners' wages, like all others, are regulated by the relative amounts of demand and supply. No combination can compel a master to give 20s. if he can obtain as skilled a workman for 16s.; and he would be able to do so because no combinations can be general. Strikes and unions always end in great privations to the workman, and in his succumbing at last.

BUNSEN'S BURNERS.—"G. S." will be obliged by our correspondent "A. W. W." (June 7th), stating where Bunsen's burners are to be obtained, and their price.

YORK FLOWER SHOW (C. Kennaway).—We cannot criticise in any way the statement made by our contemporary.

MISSING COLOURS (Mrs. Osborne).—There is no practical book upon the subject. Many relative papers have been published in this Journal, and we are always ready to criticise and suggest alterations in modes of planting submitted to us for the purpose. We cannot furnish details, we can only point out defects.

CENTAUREA CANDIDISSIMA SEED (Irish Lady).—It will grow from seed, and that most freely, but the difficulty is to procure the seed. We do not know of whom it may be procured, in fact we rather think it is not yet in the trade. When you obtain seed we shall be most happy to tell you when and how to sow it to produce plants.

FUNGUS IN TAN (Orchidophilus).—The fungus complained of is perfectly harmless, though unsightly. It may be destroyed by moving the surface of the tan briskly with a piece of wood whilst it is in its frothy state. Salt will also kill it, and injure the roots of everything it comes in contact with; but nothing is so destructive to the fungus as quicklime.

FEEN SPORES—HAMPTON COURT VINE—WORK ON THE VINE (Ruby).—The fronds may be rubbed between the hands over the pot until they become so much dust, and then laid on the surface. It is the dust which the spores contain that produces the plants and if a quantity of that dust (which is the spores) fall on the soil, it is sufficient without picking off the large brown specks, which as likely do not as do contain spores. The Hampton Court will do well in a cool vinery, and so will any of the Hamburgs, except the Muscat and Golden Hamburgs. The Hampton Court is certainly a good variety of Hamburg, but we consider the Victoria, and Pope's Hamburg superior to it. We have in the press a book on the Vine, which will be published shortly, and it is likely to suit you. We are obliged by the Nasturtium seeds, which we fear are not sufficiently ripened to germinate, but if they do we will let you know about this time next year what we think of it.

GRAFTING AXALEAS (W. H.).—We cannot advise you to graft Axaleas in September, but the operation may be performed at that time if the stock be growing, otherwise it is doubtful whether the graft will take or not. The grafts should be inserted in the strong healthy parts of the stem, their age is immaterial if only they be clean and free in growth.

BUDDED MANETTI STOCKS (Country Curate).—The bud should not be covered with soil, for the moss is sufficient to keep the stock moist and cause the sap to flow into the bud. You have done quite right to shorten the shoots of the stock, but they must not be stopped too closely, otherwise the bud will be forced into growth, perhaps, late in the autumn, which is a drawback rather than a gain. In spring, after the bud has grown, cover the stock with soil a few inches higher than the bud, this will probably cause roots to be emitted from that part, and you will have a plant fed by the stock, with the advantage of being on its own roots as well. You may take up the stocks budded with tender kinds of Roses, pot them, and winter in a cold frame, or protect the buds in winter from the severity of the weather by wrapping some hay loosely round them.

GRAPES SHRIVELLING (S. R.).—The Black and Grizzly Frontignan are about the tenderest of Grapes. Neither of them will bear heavy cropping without being liable either to shrivel or shank; and for both the soil should have more calcareous matter, as old lime rubbish, bricks, and lumps of stone, than would be requisite for other kinds. In such a season as we have had in the south, watering the borders would be an advantage. In damp summers such Grapes and Chasselas Mûqué would be better if the borders were covered with ashes to keep them dry. The Frontignans in pots would have been benefited by weak manure waterings when the fruit was swelling, but as it is now ripening the manure waterings could do little good. If the crop is heavy removing a few bunches might help to keep the rest from withering away.

APRICOT TREES IN POTS (T. L.).—Not only does Mr. Rivers produce an abundance of fine and well-ripened Apricots in pots without these having their bottoms knocked out, but we have so grown them ourselves.

KONIGA MARITIMA (J. A.).—This is the same as Alyssum maritimum and Glyceria maritima. The plant is now generally allowed to form the genus Koniga.

FLORIST AND POMOLOGIST (G. K.).—The Autumn Nells will be described under Graham's Autumn Nells, it being the desire of the raiser that his name should be associated with it. The Editors would be too glad to adopt the course you desire, but it is not a remunerative one, and they do not see their way to any alteration in the price. If those whose interest it was to have supported the experiment the Editors so liberally attempted had done their duty, the plan need not have been relinquished.

NAMES OF FRUIT (J. M. Sadler).—1, Louise Bonne of Jersey; 2, Croft Castle; 3, Gansel's Bergamot; 4, Ne Plus Meuris. (P. J. M.).—1, Ambrosia; 2, 4, 8, 9, 15, Beurré Diel; 3, 6, 16, Uvedale's St. Germain; 5, Poire Figue; 10, Napoleon; 12, Easter Beurré; 18, Norfolk Beeding; 17, Ne Plus Meuris.

JACOBÆA LILY HARDY (Jacobæa Lily).—You are quite right in your statement that Mr. Beaton, at page 180, vol. i., of THE COTTAGE GARDENER, affirms that this Lily "Is found to be quite hardy in England if planted in front of a greenhouse, or in dry earth everywhere, if planted 6 inches below the surface;" but he goes on to say that it never flowers unless taken up in autumn. We really do not perceive what information you require more than Mr. Beaton has recorded.

CLOTH OF GOLD GERANIUM FAILING (A Constant Reader).—We grow this Geranium, and find it rather more tender than Tom Thumb or Trencham Scarlet. It is a fine plant for an edging to beds, and has an excellent effect in chain and ribbon-borders. We think that in your case something very obnoxious to the roots is present in the soil in rather large quantity, or the leaves would not wither and die off as you represent. This Geranium likes a rather dry light soil, but in other respects its treatment does not differ from that of bedding Geraniums generally, except in its requiring to be taken up and potted a fortnight earlier in autumn, for cold rains make sad havoc among the foliage; and it ought not to be planted out so soon in summer by ten days or a fortnight.

MAKING A FRUIT GARDEN—PROTECTING FRUIT TREES (H. C.).—We agree with your plan so far as regards planting the wall 100 feet long and 10 feet high with Peach and Nectarine trees, and we know of no reason why you should not plant some part of the space with the other fruits named; but we do not approve of your plan of having a fixed frame of iron wire netting to protect them from birds. Recently we had an inquiry whether these contrivances would answer for protecting the blossoms of fruit trees from frost in spring and the fruit from the attacks of birds. We are glad to have an opportunity of disabusing our readers of such an idea, and to observe that the buds and fruit of the Peach and Nectarine are rarely if ever preyed upon by the feathered tribe; that wire netting affords no protection to the bloom from spring frosts; that birds do not devour the buds of Strawberries and Raspberries, and consequently the netting is of no use for them at any period except when the fruit is ripening; that from the time of the fruit being ripe to that of the leaves falling birds do not prey on the buds of Cherry trees, Currants, and Gooseberries—the wire netting is consequently of no value at that time, but obstructs much of the sun's light and heat, so necessary to the perfecting of the wood and maturation of the fruit-buds, on which depend next year's prospects; lastly, that half-inch wire netting fixed over fruit trees will obstruct one-sixth of the sun's light and heat, and whilst it will not prevent the attacks of insects it will effectually shut out their natural enemies the birds. Had we such a space of 32 feet in width and so good a wall, we would in the first place examine the soil, and if it was drained of superfluous water, and of a moderately stiff nature, we would merely trench the ground two spits deep. If not drained we would run one drain up the middle of the space at a depth of 4 feet; and if sandy, light, and poor we would add some stiff loam, give a good dressing of cow-dung, and though trenching it we would tread it firm. We would then plant Peach and Nectarine trees 20 feet apart, the first tree 10 feet from one end, and the remainder 20 feet apart, so that five trees would be necessary. These may be 1 Royal George, 1 Grosse Mignonne, 1 Noblesse, and 1 Early York Peach, and 1 Elrune or 1 Violette Hâtive Nectarine. The produce when the trees were in full bearing would be about 1000 Peaches and Nectarines. The most suitable material to protect the bloom from frost is woolen netting with quarter-inch meshes. This may be purchased at about 8d. per yard; but if you do not mind the expense, the best thing that could be done would be to cover the wall with glass. Having a good back wall, you would only need upright posts in front, which should be left 4 feet out of the ground, and be covered with three-quarter-inch deals, the uppermost but one being hung on hinges for ventilation. The sashes would be 20 inches apart—that is, the rafters, for we would dispense with the sash system altogether, leaving a space at top 2 feet wide, which would be fitted with a glazed frame to open the full length of the house by lifting up. Glazed and fitted up in every way as a lean-to house 15 feet wide, 10 feet high at back, and 4 feet in front, an admirable fruit-house might be constructed. Peaches and Nectarines might occupy the back wall, 6 feet from which you might have a row of Peaches and Nectarines in pots, or planted out 4 feet apart, and trained as pyramids; 3 feet from these towards the front there might be a row of Plums as bushes, and 3 feet from these again a row of Cherries, planted in quincunx fashion. A house of this kind would be far preferable to a wire cage. With but ordinary management it would afford some very fine fruit, whilst if well managed it would be profitable as well as afford a delightful occupation. If you do not approve of this, which would not cost much more than a useless wire cage, we would plant the Peach trees as before stated, and 4 feet from the wall mark out a bed 4 feet wide, and plant it with Eclipse Strawberries. We would then leave a two-foot alley, and have another bed 4 feet wide, and in this plant La Constante and Keens Seedling Strawberries; then another four-foot bed with a two-foot alley between it and its neighbour, and in this plant a row of pyramidal Cherries 6 feet apart, and two rows of British Queen Strawberries. 3 feet from the edge of this bed we would plant a row of Fastolf Raspberries 3 feet apart, and 4 feet from it a row of Black Currants and Red Currants, which would leave space in front for one row of Gooseberries ultimately, but two to begin with. Now, for protecting the Strawberries nothing surpasses ordinary netting, such as herring-nets, which may be purchased for a mere trifle per yard; but for the Cherries, Raspberries, Currants, and Gooseberries wire netting is better. We advise you to employ nets of any kind but sparingly, and never except when absolutely necessary, and then they should be made moveable; and it is for you to decide whether flexible netting would not be much more handy and also more economical than wire netting. In conclusion we would say, presuming you to have the house, you would plant a row of Raspberries in the ground in front of the house, and 4 feet from it; at a like distance from these a row of Black and Red Currants; 3 feet farther off a row of Gooseberries; and in front of all, three rows of Strawberries, the first 3 feet from the Gooseberries, and the other 4 feet from the first. We have no doubt but that either of these arrangements would afford you a quantity of ripe fruit.

PINK LOBELIA (E. L. W.).—Kermesina Lobelia is as dwarf and compact as speciosa, but when true reddish pink; it should be increased by cuttings, as, when raised from seed, the seedlings vary in habit and shade. We have pretty well decided on not using it freely for one reason—there is no means of keeping birds from it when young, unless stringing it or netting it over. As soon as the pink flowers showed away went flower and plant too, unless firmly fastened. When the plants are fully established the birds do not touch them. They served us with this Lobelia exactly as they did with young seedlings of Beet.

AQUATICS IN POTS (Rugby).—You may grow some in pots or pans without holes in them, or these closed up. If you place a few inches of stiff loam at the bottom. We have grown many kinds in pans, 1 foot 6 inches wide and 1 foot deep, without any holes of course at the bottom, this and the outside being glazed. At the bottom we placed from 4 to 6 inches of stiff loam two-thirds, and spongy boggy peat one-third, and in this compost we put in the plants, one or more in each according to the size, making them secure with a few stones upon the roots, or fastening them with pegs. Sufficient water was then added to allow of the leaves floating, or just covering them if of erect habit, adding more water as growth advanced until the pan was full to the brim. Aquatics require a light and airy situation, and the temperature necessary for the species. Rain water is the most suitable for them, though hard water will do if exposed to the atmosphere some time prior to using it. You name *Pontederas*, of which *Pontederas cordata* and *P. angustifolia* are all but if not quite hardy, but they do well in a greenhouse temperature; *P. azurea*, from Jamaica, requires a warm greenhouse; and *P. lanceolata* a temperature of at least 45° in winter to do well; *P. crassipes*, from Guiana, requires the heat of a warm stove; and *P. dilatata* the ordinary heat of a stove; *Thalia dealbata*, from South Carolina, does well in a warm greenhouse. In addition to these you may have *Richardia ethiopica maculata*, a fine-leaved kind, and the species; *Peltandra virginiana*, the majestic *Papyrus elagans*, the Two-spined Water Caltrop (*Trapa bispinosa*), which is a biennial; the Two-horned (*T. bicornis*), a perennial from China; *Sagittaria graminea*, *S. Doniana*, and *S. lanceifolia*.

INSECTS DESTROYING (V. G. C.).—Springing the foliage of the *Dianthus* with tobacco water made by pouring a gallon of boiling water on an ounce of shag tobacco will free them of the aphid, but it may be necessary to repeat the dose. Water freely at the roots with weak liquid manure, which may be made by dissolving 2 ozs. of guano in a gallon of rain water, and this with frequent sprinklings of water overhead should enable your plants to outgrow the enemy. As the seeds of the *Kaulfussia* did not come up they must have been bad or sown too deeply. Insects had nothing to do with destroying them. Give the ground a dressing of quicklime in the spring, or in the autumn if the ground be then dug, and another dressing of soot in the spring, which should be mixed with the soil or forked-in, and this will improve the soil and render it distasteful to worms and grubs.

FLOWER-GARDEN PLAN (J. W. Boyd).—We have no fault whatever to find with the proposed plan of the flower garden in front of the range of houses. Such a plan would look best with slate, stone, or Box edgings, and gravel between. There scarcely seems room enough for grass between the beds. Well planted, the pair of similar groups, of five clumps each, would look well. We cannot say so much for the proposed arrangement on the south and lower level of lawn. Why should the *Wellingtonia* be placed in the centre of the diamond in the middle? and what beauty can there be in the four acute-angled triangles round it? As the *Pinus* tribe flourish so well with you, suppose that you place the *Wellingtonia* on the open lawn, and two *Araucarias* and two *Deodars* in the four corners, so as to give them room to grow, and then have a couple of ovals or circles for the *Sikkim Rhododendrons*. The roundness of their outline will contrast favourably with the acute angles on the upper terrace, but which there are quite at home. Were the inner platform made into a flower garden, we would have a different style from that adopted on the upper platform. We are pleased to hear of the health of the Vines, *Araucarias*, *Rhododendrons*, &c. The only explanation which we can offer as to your not finding flower-garden plans at the pages you mention, is that you must have taken up the wrong volume. The references are quite correct as applied to Vol. VI., to which they belong.

WALL TAKEN INFESTED WITH INSECTS (S. T.).—Any time after the leaves have fallen up to the middle of February undo the trees from the wall, and if the mortar be much perished point up the nail-holes; and when this is done paint the wall from top to bottom with half a peck of lime, an equal quantity of soot, and 2 lbs. of sulphur vivum, made into the consistency of thick paint by a sufficiency of urine heated to boiling point. This solution will rubbed into every hole and crevice of the wall will be a dish that few insects like. In addition to this the trees should be dressed with a solution of sulphur vivum 2 lbs., soft soap 2 lbs., and 1 lb. of the strongest shag tobacco. Boil the tobacco in water for an hour and let it stand until cool, then strain, and dissolve the soft soap in it, and add the sulphur and sufficient hot water to make it five gallons at a temperature of 160°. With this paint every shoot and stem, rubbing it well into every hole and crevice of the bark and joints of the wood, being careful not to dislodge the fruit-buds. The wash should be applied with a brush, and in winter before the buds begin to swell. An effectual mode of exterminating ants is to mix arsenic with sugar and water to the consistency of treacle, or equal quantities of honey and arsenic, either of which the ants greedily devour; but care must be taken that no animal have access to it. Guano will drive them away, and lime water will dislodge them. See remarks on this subject in Nos 178 and 179.

NAMES OF PLANTS (A. M.).—Your "Thistle" is not a Thistle, but *Tragopogon pratensis*, or yellow Goat's-beard. The other plant is *Helianthemum vulgare*, common Rock-rose or Dwarf Cistus. (*Alpha. Acton*).—1, *Polypodium vulgare cambricum*; 2, *Lastrea dilatata*. (*E. F.*).—1, *Spiranthes autumnalis*; 2, *Asplenium trichomanes*; 3, *Doodia caudata*; 4, *Onychium asarifolium*; 5, *Doodia media*. (*M. D., Richmond*).—Your plant is not a true *Bignonia*, but belongs to the allied genus *Pithecoctenium*. As far as we can make out it is an undescribed species, but we will endeavour to ascertain more about it. The flowering of the *Ailanthus* is not an uncommon event.

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

THE AGRICULTURAL HALL SHOW AND THE POULTRY CLUB.

I did not intend to enter into the above controversy, but the letter of "AN EXHIBITOR" demands some notice, so I trust you will allow me a short space in your columns.

What the motive can be for attacking the Show I cannot conceive. I believe the Show to be got up on the most impartial principle, and the fact of asking the Club to select

judges fully bears that out. The Club, we know, has many enemies, but I am pleased to say treble the number of friends; and, as a member of it, I fearlessly assert its sole object is "a fair field, and that the best birds may win." Its rules, with which so much fault is found, I admit are not faultless; but, then, my principle is not to cry the whole thing down, but join, and then remedy the fault. Poultry shows are surely few enough (at least, of this stamp), and keep getting less, so that, instead of opposing, it should be the earnest desire of all exhibitors to work together to establish such Shows as these on a sound and firm basis. I fearlessly maintain a more suitable building, or a better manager than Mr. Douglas (if his equal), cannot be found.

As regards the appointment of Judges, I, for one—and I never heard but the one opinion—consider it far better the Judges' names should not be published, or that even they should be selected so long in advance. Three gentlemen will be at Islington of well-acknowledged repute, and who have the confidence of exhibitors in general. They were once large and most successful breeders, though now retiring from the arena as exhibitors.

"AN EXHIBITOR" seems hard put to, to find fault when he wants to know who guarantees the payment of the prizes. Have the former Shows broken faith with their supporters? I challenge "AN EXHIBITOR" to prove anything at all against them; and I doubt not, if there be many of his class, which I do not for one moment suspect there are, the whole of the money would be lodged in some bank, or the Editors' hands.

In conclusion, I would fain urge exhibitors to pull together and support such Shows, and not condemn anything without a trial. I trust to see such a gathering that has never before been witnessed in the metropolis.—A STEWARD.

DEWSBURY POULTRY AND PIGEON EXHIBITION.

YEAR by year this Show has risen in public estimation, and without a doubt the meeting just held has been the most successful of any. This is a matter of congratulation, but at the same time it is the just reward of the efforts made by the directing Committee; and with care it is probable that the Dewsbury future shows will stand high in the ranks of our poultry exhibitions.

There is one little comment to be made on the arrangements. The pens might be improved; and as the wirework is fast becoming imperfect, we would suggest in future shows either to renew it altogether, or to provide new wire folding-pens. These would soon give a return of the first outlay if lent out to neighbouring shows on hire, or even, in fact, by the advantages they would afford to the Dewsbury Show alone, if laid by from year to year. August 31st, the day of the Show, was one of those eccentric vicissitudes of weather for which our fatherland is so proverbial. At the earliest dawn everything promised most favourably. About six o'clock A.M. a scudding shower caused a little anxiety, but it was so transient that all fears were soon banished by a temporary sunshine. At eight, however, the most gloomy apprehensions were hopelessly indulged in by the reputedly weatherwise. It rained for an hour incessantly, and so violently that the workmen employed could not possibly go on, and every one deplored the now apparent certainty of complete failure. Every object as far as the eye could reach was completely drenched, and as an aged agriculturist observed in our hearing, "this is a glorious rain for our turnips and pasture lands, but it's certainly settled the Show." We, as did all others, rejoiced to find his prophecy unfulfilled, for between nine and ten a good sharp breeze arose, the sun shone with redoubled power, the roads and grass were soon equally dry, matters progressed rapidly, and though the Show was a little delayed, the event proved that, nothing daunted, one continuous throng of visitors filled the grounds from midday to nightfall.

As to the quality of the Poultry and Pigeons all were exceedingly good, but the old birds did not show to the advantage they will do when they have attained full feather. We purpose, therefore, confining our remarks to a few only of the principal pens that had somewhat renewed their plumage. In *Cochins* Miss Beldon exhibited some first-rate

Buff both old and young; and the same was equally the case with the White Cochins shown by Mr. Dawson, of Hopton, Mirfield. Among the many excellent chickens shown we must briefly allude to both the Golden and Silver-spangled Hamburgs of Miss Beldon, for they are such as sugar many triumphs yet to come. Mr. Dyson's Black Red Game chickens (pen 60), were equally praiseworthy—in fact, as good as any yet shown this year, and very early ones. The Game sweeps for single cocks were as nearly a failure as could well be imagined, two of the so-called "sweepstakes" containing only a single entry, and the third having but two birds in competition. The great uncertainty of getting up a competition by the sweepstakes arrangements brings them day by day into greater public disfavour. If not more freely supported, as a matter of course, Committees of poultry shows have no alternative save to abandon them altogether; for to call a bird a "winner" when there are none to dispute his title, and again to win only his own entry fee back, deducting expenses (as enforced by the schedules issued for these classes), is ill-calculated to increase the popularity of such "sweepstakes." Before concluding our remarks on the poultry we cannot forbear a brief allusion to the class in which a "Committee's silver cup" was given for the best pen of poultry (any breed) in the Exhibition, but to be specially entered at increased fees for this class, though still enjoying the privilege of competing in their respective classes also; or exhibitors could enter singly for this cup only. A very spirited and capital competition of twelve first-rate pens ensued, embracing many of the principal prize-winners in the previous arbitrations. Mr. Cannan, of Bradford, was the winner with a beautiful pen of *Spasiah* chickens, but very closely pressed by nearly the whole of the twelve competitors. As a single cup was only to be awarded, and these prize birds had still to take their places in their original positions after the cup was awarded, no high commendation was recorded in this special class, as it would have only led to many misapprehensions if found attached to pens already boasting a first or second prize in their own variety, otherwise every one was well deserving of this special recognition of good quality.

The Pigeons were good, but the very heavy gale of wind was much against them; the Carriers evidently becoming almost blinded by its effects. This variety of Pigeon, when confined within its power, suffers seriously from continuous wind; so much so as sometimes to be permanently injured.

COCHINS (White).—First, Miss E. Beldon, Bingley. Second, W. Dawson, Hopton. *Chickens*.—First, Miss E. Beldon. Second, W. Dawson. Highly Commended, R. Wade, Halifax.

SPASIAH.—First, Miss E. Beldon. Second, W. Cannan, Bradford. Highly Commended, R. J. Wood, Manchester. *Chickens*.—First, W. Cannan. Second, J. Vickerman, Chiklenley. Commended, E. Brown, Sheffield.

DORKINGS.—First, Miss E. Beldon. Second, E. Leach, Rochdale. *Chickens*.—Prize, E. Leach.

HAMBURG (Golden-spangled).—First, Miss E. Beldon. Second, W. Cannan, Bradford. *Chickens*.—First, Miss E. Beldon. Second, H. Carter, Holmfirth.

HAMBURG (Silver-spangled).—First, Miss E. Beldon, Bingley. Second, W. Cannan, Bradford. *Chickens*.—First, W. Cannan. Second, Miss E. Beldon.

HAMBURG (Golden-pencilled).—First, J. Sunderland, Coley, Halifax. Second, Miss E. Beldon. *Chickens*.—Prize, Miss E. Beldon.

HAMBURG (Silver-pencilled).—First, Miss E. Beldon. Second, W. Cannan. *Chickens*.—Prize, Miss E. Beldon.

POLAND (Gold or Silver-spangled).—First and Second, Miss E. Beldon. *Chickens*.—First and Second, W. Newsome, Bingley.

POLAND (Any other variety).—First, W. Newsome. Second, Miss E. Beldon. *Chickens*.—Prize, W. Newsome.

GAME (Black-breasted and other Reds).—First, E. Beldon, Bingley. Second, H. Snowden, Bradford. *Chickens*.—First, T. Dyson, Halifax. Second, J. Fell, Aewalton. Highly Commended, J. D. Newsome, Batley; J. Ineson, Staincliffe; J. Vickerman, Chiklenley. Commended, J. Sunderland, Coley, Halifax.

GAME (Duckwings and other Greys and Blues).—First, Miss E. Beldon, Bingley. Second, J. Fell. *Chickens*.—First, J. Fell. Second, H. Snowden. Commended, T. Vickerman.

GAME (White and Piles).—First, J. Sunderland. Second, H. C. Mason, Drighlington. *Chickens*.—Prize, W. Whiteley, Liversedge.

GAME (Black and Brassy-winged, except Greys).—First, Miss E. Beldon, Bingley. Second, J. Oldroyd, Dewsbury Moor. *Chickens*.—First and Second, J. D. Newsome, Batley.

BANTAMS (Gold and Silver-laced).—First, W. Cannan, Bradford. Second, Miss E. Beldon.

BANTAMS (Black and Silver-laced).—First, C. A. Ridgway. Second, W. Cannan.

BANTAMS (White and Silver-laced).—First and Second, S. Schofield, Heckmondwike.

BANTAMS (Game).—First, C. Lister, Mirfield. Second, W. T. Entwistle.

ANY BREED NOT MENTIONED.—First, J. D. Newsome, Batley. Second, C. Lister, Mirfield. Highly Commended, Miss E. Beldon, Bingley; W. K. Duxbury, Leeds. Commended, E. Leach, Rochdale. *Chickens*.—First, E. Leach, Hadden Bridge. Second, Miss E. Beldon, Bingley.

DUCKS (White).—First, E. Leach, Rochdale. Second, Miss E. Beldon, Bingley.

DUCKS (Brown).—First, E. Leach, Rochdale. Second, J. D. Newsome, Batley.

GESE.—First and Second, W. K. Duxbury, Leeds.

SWEETSTAKE COCK (Any Colour).—Prize, H. C. Mason, Drighlington.

SWEETSTAKE GAME COCKEREL.—First, H. C. Mason. Second, T. Vickerman, Chiklenley.

SWEETSTAKE GAME BANTAM COCK (Any Colour).—Prize, Wallis & Oldroyd, Dewsbury.

PIGEONS.

POWTER.—Cock.—First, H. Brown, Sheffield. Second, Miss E. Beldon, Bingley. Hen.—First, H. Snowden. Second, Miss E. Beldon.

CARRIERS.—Cock.—First, J. Firth, jun., Dewsbury. Second, J. W. Edge, Birmingham. Hen.—First, J. Firth, jun. Second, Miss E. Beldon, Bingley.

TUMBLERS (Almond).—Prize, H. Snowden.

TUMBLERS (Any other variety).—First, H. Snowden, Bradford. Second, H. Yardley, Birmingham. Highly Commended, Miss E. Beldon, Bingley.

TRAVERS.—First, H. Yardley. Second, Miss E. Beldon. Commended, H. Brown, Sheffield.

JACOBI.—First, Miss E. Beldon, Bingley. Second, H. Yardley, Birmingham.

TUMPTERS.—First, Miss E. Beldon. Second, F. Key, Beverley.

OWLS.—First, J. W. Edge. Second, Miss E. Beldon. Highly Commended, H. Brown, Sheffield.

BASS.—First, J. Firth, jun., Dewsbury. Second, Miss E. Beldon, Bingley. Commended, J. Firth, jun.; H. Yardley, Birmingham.

FAVORITE.—First, J. Firth, jun., Dewsbury. Second, J. W. Edge, Birmingham.

NUNS.—Prize, J. W. Edge, Birmingham.

COMMON.—First and Second, J. Vickerman, Chiklenley. Commended, Wallis & Oldroyd, Dewsbury.

ANY OTHER VARIETY.—First, H. Yardley, Birmingham. Second, Miss E. Beldon.

RABBITS.—Lop-eared.—First, W. H. Firth. Second, J. W. Nutter, Dewsbury. For Colour.—First, C. A. Ridgway. Second, J. Squires, Rothwell. For Weight.—Prize, T. Smith, Dewsbury Moor.

SILVER CUP FOR BEST PEN IN THE EXHIBITION.—W. Cannan (Spanish Chickens).

JUDGES.—Mr. Thompson, of Saint Ann's, near Halifax; and Mr. Hewitt, of Sparkbrook, near Birmingham.

HALIFAX AND CALDER VALE POULTRY SHOW.

THE twenty-sixth annual Exhibition took place on Saturday the 27th ultimo, in Clare Hall Park, Halifax, which had been kindly lent for the occasion by Joshua Appleyard, Esq. The day was beautifully fine, and the attendance of visitors very great, the Park being densely crowded in every part. The arrangements were admirable in every respect. Poultry numbered 383, and Pigeons 137 pens.

Spasiah were good classes, Messrs. Cannan, Rodbard, and Beldon each exhibiting specimens of great merit. The first-prize chickens, we thought, should scarcely have been so high in the list, for, although good, the second-prize pen contained a superior cockerel and a good pullet.

Dorkings did not show to advantage; the prize pens were of average quality in adults, while the chickens contained some good birds.

In *Cochins* Miss Beldon, Captain Heaton, and Mr. Stretch took the prizes for Buffs with capital pens—indeed, seldom have such really good birds competed at an agricultural show. In any other variety of *Cochins* first prizes were awarded to Partridge, Whites taking second.

Brahmas numbered twenty pens, ten in each class, and Mr. Lacy outdistanced competition in both classes with splendid dark-coloured pens.

For the best *Game Cock* or *Cockerel* Mr. Fletcher had the silver cup, value five guineas, with a magnificent *Brown Red* cock well shown, *Black Reds* taking second and third, a splendid *Brown Red* and a *Duckwing* receiving high commendation. The first-prize single *Game cockerel* shown by Mr. Dyson, a *Black Red*, deserved his position, though we fancied him too much cramped in foot. In *Black Red Game* Mr. Brierley's first-prize pen in old birds was good; and Mr. Croeland's first-prize chickens were very promising, while the second contained a bad-footed cockerel. In *Brown Reds* Mr. Aykroyd took first with a capital pen, the hen being unusually good. The chickens of the same colour were a wretched lot. The cockerel in the first-prize pen was duck-clawed, and poor in every respect. Old *Duckwings* were in force though much out of feather, the first and second pens being most noticeable. In chickens of the same colour Mr. Aykroyd's first-prize pen was splendid—the pullet of unusual

excellence, the cockerel capital in colour and shape, though requiring more development—a better pen we have seldom seen. In Any other Game, good Blacks were first in the old class.

In *Polands* White-crested Blacks, shown naturally, were first, Silver second. In chickens Silvers were first; the other two prizes being awarded to White-crested Blacks, the third-prize pen being excellent, and should have taken a higher grade.

Hamburghs were numerous and good, this district being noted for these varieties, the Golden-spangled and Silver-spangled deserving especial mention. Miss Beldon had a large proportion of the prizes with pens wonderful in condition, and of great merit.

Any other distinct breed brought out Mr. Dawson's beautiful Sultans in old birds. In chickens Andalusian took first.

The prize *Game Bantams* were capital; and the Laced and Other variety class contained many good pens.

Mrs. Seamons added another triumph to her list in *Aylesbury Ducks*. The Rouen were, however, superior in quality, the first and second pens more especially.

Geese and Turkeys were an average lot.

The following is the prize list:—

SPANISH.—First, W. Cannan, Bradford. Second, J. R. Rodbard, Wrington, Bristol. Third, Miss E. Beldon, Bingley. *Chickens.*—First, J. R. Rodbard, Second, W. Cannan. Third, Miss E. Beldon.

DORKING.—First, W. Gaman, Thornton-le-Moors. Second, Miss E. Beldon, Bingley. Third, C. W. Brierley, Middleton. *Chickens.*—First, C. W. Brierley. Second and Third, Rev. J. F. Newton, Kirby-in-Cleveland. Highly Commended, Miss E. Beldon.

COCHIN-CHINA (Cinnamon or Buff).—First, Miss E. Beldon. Second, E. Smith, Middleton. Third, T. Stretch, Ormskirk. *Chickens.*—First, Capt. Heaton, Manchester. Second, T. Stretch. Third, Miss E. Beldon. Highly Commended, C. E. Risdale, Skircoat; C. T. Bishop, Lenton, Nottingham.

COCHIN-CHINA (Any other variety).—First, T. Stretch (Partridge). Second, W. Dawson, Mirfield (White). Third, W. Bowley, Cirencester. *Chickens.*—First, T. Stretch (Partridge). Second, W. Dawson (White). Third, R. Wade, Halifax.

BRAMA POOTRA.—First and Second, H. Lacy, Hebden Bridge. Third, Mrs. Seamons, Aylesbury. *Chickens.*—First, Second, and Highly Commended, H. Lacy. Third, T. Pomfret, Preston. Highly Commended, Mrs. Seamons.

GAME COCK OR COCKEREL (Any colour).—Cup, J. Fletcher, Manchester. Second, W. Boyes, Beverley. Third, T. Bottomley, Shelf. Highly Commended, Miss E. Beldon; H. Adams, Beverley.

GAME COCKEREL (Any colour).—First, T. Dyson, Halifax. Second, H. C. Mason, Leeds. Third, G. Noble, Dewsbury.

GAME (Black-breasted Red).—First, C. W. Brierley, Middleton. Second, J. Sunderland, jun., Coley Hall. Third, J. Firth, Ellen's Grove. *Chickens.*—First, J. Crossland, jun., Wakefield. Second and Third, T. Dyson, Halifax. Commended, J. Firth.

GAME (Brown-breasted and other Reds).—First, E. Aykroyd, Bradford. Second, W. Gaman, Thornton-le-Moors. Third, Miss E. Beldon. *Chickens.*—First, J. Firth. Second, J. Crossland, jun. Third, R. Hemingway, Shelf.

GAME (Duckwing, Grey, and Blue).—First, D. Crossley, Halsey Hill. Second, E. Aykroyd, Bradford. Third, W. Bentley, Crockheaton. Highly Commended, C. W. Brierley, Middleton. *Chickens.*—First, E. Aykroyd. Second, H. Snowden, Horton. Third, G. Hartley, Leeds.

GAME (Any other variety).—First, Miss E. Beldon. Second, J. Hanson, Hipperholme. Third, Master D. Edwards, Fibby Park. *Chickens.*—First not awarded. Second, G. Noble, Dewsbury. Third, B. Naylor, Heckmondwike.

POLAND.—First, H. Carter, Holmfirth. Second and Highly Commended, Miss E. Beldon. Third, J. Smith, Keighley. *Chickens.*—First, Miss E. Beldon. Second, H. Carter. Third, J. Smith.

HAMPSHIRE (Golden-pencilled).—First, R. Hemingway, Shelf. Second, S. Smith, Northowram. Third, J. Hollings, Horton Bank Top. *Chickens.*—First, S. Smith. Second, R. Hemingway. Third, Miss E. Beldon.

HAMPSHIRE (Silver-pencilled).—First and Second, Miss E. Beldon. Third, J. Sunderland, jun. *Chickens.*—First and Third, W. Maude, Bingley. Second, Miss E. Beldon. Highly Commended, J. Stell, Keighley.

HAMPSHIRE (Golden-spangled).—First, Miss E. Beldon. Second, W. Cannan, Bradford. Third, J. Andrews, Ashton-under-Lyne. *Chickens.*—First, N. Marlor, Manchester. Second, J. G. Sugden, Keighley. Third, J. Pickles, Slithwaite.

HAMPSHIRE (Silver-spangled).—First and Second, Miss E. Beldon. Third, Mrs. H. Sharp, Bradford. *Chickens.*—First, Miss E. Beldon. Second, W. Cannan, Bradford. Third, Mrs. H. Sharp. Highly Commended, C. Cowburn, Leeds.

HAMPSHIRE (Any other variety).—First and Second, Miss E. Beldon. Third, C. Pease, Darlington. *Chickens.*—First, J. Hargreaves, Skipton. Second, Miss E. Beldon. Third, S. Briggs, Holywell Green.

ANY OTHER DISTINCT BREED EXCEPT BANTAMS.—First, W. Dawson, Mirfield (The Sultan's Fowls). Second, C. W. Brierley. Third, C. Lister, Mirfield (Silkies). *Chickens.*—First, W. Barber, Ovenden (Andalusian). Second, M. Smith, Ainley (Malays). Third, C. Lister (Silkies).

BANTAMS (Game).—First, G. Noble, Staincliffe, Dewsbury. Second, J. Crossland, jun., Wakefield. Third, R. M. Stark, 6, Claremont Terrace, Hull. *BANTAMS* (Gold or Silver-laced Sebright).—First and Third, Miss E. Beldon. Second, W. Cannan.

BANTAMS (Any other variety).—First, W. Cannan. Second, G. Noble. Third, S. Schofield, Heckmondwike.

DUCKS (Aylesbury).—First and Second, Mrs. Seamons, Hartwell, Aylesbury. Third, F. M. Hindle, Bury New Road, Haslingden.

DUCKS (Rouen).—First and Second, S. Briggs. Third, G. Noble.

DUCKS (Any other variety).—First, S. Briggs (Wild). Second, J. Oates, Felton. Third, J. R. Jessop, Beverley Road, Hull Wild.

GOOSE.—First, W. E. Darbury, 9, Pittmore Road, Leeds. Second and Third, E. Edwards, M.P., Pye Ness (Canadian Geese). **TURKEYS.**—First, C. W. Brierley. Second, Hon. Lady Hawke, Womersley Park, Pontefract. Third, W. Cannan. **SELLING CLASS** (Any Breed).—First, Miss E. Beldon. Second, W. Smith, Beech Hill. Third, S. Briggs (Golden-pencilled Hamburgs).

PIGEONS.

In the Pigeon department the classes were well filled. *Pouters* were good. In cocks a fine Blue was first; and in hens a lengthy White, rather short in leg, took a similar position. Mr. Eden's highly commended White cock should have had a step higher. In *Carriers* Mr. Eden had it all his own way, for, with the exception of a highly commended Black hen, there was nothing approaching the prize birds in either of the classes. The first Almonds, and first and second Black Mottled Tumblers were capital. Blue Beards and Black Balde had first and second in the class allotted to them. In *Owls* fine Whites took the prizes. In *Turbitus* Silvers in beautiful condition were first; Reds, too coarse, were second; a good pair of Yellows were commended. Good Red Jacobins took first and second in the class for that variety. Fantails were not so good as we have seen. In *Barbs* the first went to capital Blacks, the cock being defective in the colour of the eye, otherwise good in every other point, and accompanied by a fine hen—Yellows were second. *Dragons* were numerous, the first-prize pen of Blues was not equal to the highly commended pen of the same colour. *Trumpeters* were not so perfect as are generally shown at Halifax. The mottled cock in the first-prize pen was Mr. Shaw's famous old bird, accompanied by a poor hen. In Any other breed Blue Shields were first, and Satinettes second. In the selling class Black-headed Nuns were first, and Turbits second.

POUTERS AND CROPPERS.—Cocks.—First, S. Briggs. Second and Highly Commended, P. Eden, Cross Lane, Salford. Highly Commended, C. J. Samuels, Manchester. *Hens.*—First, H. Snowden, Horton. Second, W. Smith. Highly Commended, E. Beldon, Gilead, Bingley.

CARRIERS.—Cocks.—First and Second, P. Eden. Highly Commended, J. Firth, jun., Dewsbury; B. Consterdine, Littlebrough. Commended, S. Briggs. *Hens.*—First and Second, P. Eden. Highly Commended, E. Beldon.

TUMBLERS (Almond).—First and Second, P. Eden. Commended, H. Snowden.

TUMBLERS (Mottled).—First and Second, P. Eden. Commended, S. Briggs. **BALDS OR BEARDS.**—First, H. Yardley, Birmingham. Second, S. Briggs.

OWLS.—First and Second, P. Eden. Third, H. Yardley. Highly Commended, J. W. Edge, Birmingham.

TURBITUS.—First and Commended, S. Briggs. Second, J. Wade, Bradshaw Lane. Highly Commended, H. Yardley.

JACOBINA.—First and Second, S. Briggs.

FANTAILS.—First, S. Briggs. Second, H. Yardley.

BARBS.—First, W. B. Van Hansbergen, Newcastle-on-Tyne. Second and Highly Commended, P. Eden. Highly Commended, S. Briggs.

DRAGONS.—First, W. Smith. Second, S. Briggs. Highly Commended, J. Wadsworth, Halifax; W. Gaukroger, Halifax; and C. J. Samuels.

TRUMPETERS.—First and Second, S. Briggs.

MACPIES.—First, H. Yardley. Second, S. Briggs.

ANY OTHER BREED.—First, S. Briggs. Second and Commended H. Yardley. Highly Commended, P. Eden and C. E. Risdale, Skircoat.

SELLING CLASS.—First, H. Sunshall, Gedney. Second, W. Massey, Gedney.

JUDGES.—For Poultry.—Mr. Joseph Hindson, Liverpool; and Mr. Richard Teebay, of Fulwood, Preston.

Pigeons.—Mr. H. Weir, London; and Mr. J. W. Thompson, Southowram, Halifax.

DEANE AGRICULTURAL SOCIETY'S POULTRY SHOW.

THIS Society held their first Show on Wednesday the 31st of August, in a field near the church. The rain fell very heavily in the early part of the day, but the weather afterwards cleared up, and was very fine, and the number of visitors was consequently large. The pens of poultry were not very numerous, but there were some very good birds.

The *Spanish* headed the list, but only one pen was sent. The *Dorking* were in very bad feather, dark birds being first, and Silver Grey second. The show of *Game* cocks was not very good; and in the class for cock and two hens, Brown Red took first, and Black Reds second. In the *Cochin* class there were only two pens, Buffs taking first, and Partridge second. In the Golden-pencilled there were some very good birds; the first-prize cockerel was beautiful. The Silver-pencilled were not so good. In Golden-spangled only three pens were entered; but in the Silver-spangled class there were some splendid birds, particularly the pullets in the first-prize pen. In *Polands* Blacks were first, and Silver

second. In the Any variety class only two pens were shown; the first-prize pen, belonging to Mr. Leach, of Rochdale, was very good. Of *Game Bantams* there was a large entry, but the quality was not very good. In Any variety of *Bantams Silver-laced* took the first prize, and Blacks second.

Of *Aylesbury Ducks* only two pens were shown. Mr. Leach had a very nice pen, their beaks being very good. There was a very large entry of *Rouens*, and it was a very good class; and in the Any variety class *Carolina Ducks* took first, and *Call Ducks* second. Three very nice pens of *Geese* were shown. The following are the awards:—

SPANISH.—Prize, S. Tyldesby, Farnworth.
DORRINGS.—First, S. Farrington, Astley. Second, F. Charlton.
GAME COCK.—First, J. Turner. Second, S. Farrington.
GAME COCK AND TWO HENS.—First, C. P. Ackers. Second, J. Turner, Redcliffe.
COCHIN-CHINA.—First, J. Wood, Brinsall Hall. Second, H. Wheeler, Middleton.
HAMBURGERS (Golden-pencilled).—First, J. Haselden. Second, T. Wrigby, Middleton.
HAMBURGERS (Silver-pencilled).—First, E. Crompton. Second, J. Platt, Deane.
HAMBURGERS (Golden-spangled).—First, N. Marlor, Denton. Second, G. Whittaker.
HAMBURGERS (Silver-spangled).—First, M. Isherwood, Redcliffe. Second, J. Fielding.
POLANDS.—First and Second, S. Farrington.
ANY VARIETY.—First, E. Leech (Brahma). Second, F. Bullock, Chowbent (Brahma).
GAME BANTAMS.—First, J. W. Morris, Rochdale. Second, J. Fletcher, Stoneclough.
ANY VARIETY BANTAMS.—First, S. Farrington. Second, J. Eckersby, Hyton.
DUCKS (Aylesbury).—First, E. Leech, Rochdale. Second, A. Bowden, Westhoughton.
DUCKS (Rouen).—First, J. Nelson. Second, T. Wakefield.
DUCKS (Any other variety).—First, J. Eckersby. Second, C. P. Ackers, Bickershaw.
GESE.—First, E. Leech. Second, L. Walls.
TURKEYS.—Second, E. Leech. First withheld.
EXTRA STOCK.—First, T. Bromlow, (Pigeons). Second, W. Markland, Deane.

The Judges were Mr. Richard Teebay, Preston; Mr. Elijah Smith, Middleton.

WIRRAL FARMERS' CLUB AUTUMN POULTRY AND PIGEON SHOW.

THIS Show was held in the Birkenhead Park on the 30th of August. The site selected was exceedingly well adapted for the purpose, being on the rising ground on the west side of the lower park. There was also a flower show, which added materially to the attractions of the general Exhibition.

DORRINGS.—First, Miss Davis. Second, W. Copple, Prescot.
SPANISH.—First, G. Garlick, Rock Ferry. Second, R. Davies, Chester.
GAME.—First, J. Foden, New Ferry. Second, J. Perren, Birkenhead.
HAMBURGERS.—Prize, G. Garlick.
ANY OTHER BREED.—Prize, F. Kelshaw, Great Crosby.
ANY BREED.—Prize, G. Garlick.
BANTAMS.—First, G. Maples, Wavertree.
COCHIN-CHINAS.—First and Second, T. Stretch, Ormskirk.
DUCKS (Aylesbury).—Prize, W. Innman, Upton.
DUCKS (Rouen).—First, T. Stretch. Second, A. Woods, Sefton.
GESE (Grey).—Prize, Lady Cust, Leiston Castle.
GESE (White).—Prize, Miss F. H. Congreve, Burton.
TURKEYS.—First, Miss Davies. Second and Highly Commended, W. Davies, Lower Bebington.
PIGEONS.—*Carriers*.—First and Second, W. Stalker, Liverpool. *Pouters*.—First and Second, D. Thwaite, Rock Ferry. *Almonds*.—First, W. Stalker. Second, H. Yardley, Birmingham. *Fantails*.—First, D. Thwaite. Second, H. Yardley. *Jacobins*.—First, T. D. Walker, Hoylake. Second, D. Thwaite. *Blue Rocks*.—First and Second, D. Thwaite.

The Judges for Poultry and Pigeons were Mr. Hindson, of Liverpool; and Mr. Woolley, of Bunbury near Tarporley.

DUDLEY HILL POULTRY SHOW.

THE second annual Show of the Dudley Hill Floral, Horticultural, and Poultry Society, was held at Dudley Hill, on Saturday the 27th of August. The day was fine and the visitors numerous; and there is every reason to believe that the usefulness of the Society is becoming apparent to all the inhabitants of the locality; and doubtless another year will witness an augmentation of the prize list.

There were twenty-one classes for poultry, and thirteen for Pigeons, but the latter were not well supported with entries, though in poultry there were a good number of pens comprising some very good birds. Mr. Cannan took a large

amount of the prize money, and showed well in most of the classes.

In *Game* Mr. Hodgson showed some very good pens; and in *Game Bantams* Mr. Tetley had a splendid pen of *Furnace*. We noticed some pens that had their legs very neatly done over with green colouring.

In *Geese* there was a beautiful pen of *Spanish*.

SPANISH.—Prize, W. Cannan, Bradford.
DORRINGS.—First, H. Firth. Second, W. Cannan.
GAME (Black-breasted and other Red).—First, J. Hodgson, Bradford. Second, T. Suddick, Dudley Hill.
GAME (Duckwings).—First, J. Hodgson. Second, T. Suddick.
HAMBURGERS (Golden-spangled).—First, J. Greenwood, Dudley Hill. Second, W. Cannan. Highly Commended, J. Greenwood.
HAMBURGERS (Silver-spangled).—Prize, W. Cannan.
HAMBURGERS (Golden-pencilled).—First, J. Driver, Allerton. Second, W. Cannan. Highly Commended, J. Gomer.
HAMBURGERS (Silver-pencilled).—First, W. Cannan. Second, J. Driver.
POLANDS.—First, W. Cannan. Second, T. Suddick.
GAME BANTAMS.—First, E. Tetley. Second, H. Firth.
BANTAMS (Other variety).—First, W. Cannan. Second, J. Gomer.
COCK (Any variety).—First, W. Cannan. Second, J. Hodgson. Highly Commended, T. Suddick.
GESE (English).—Prize, — Yates.
GESE (Other varieties).—Prize, — Yates.
DUCKS (Aylesbury).—First, W. Cannan. Second, — Yates.
DUCKS (Rouen).—First, W. Cannan. Second, — Dolby.
PIGEONS.—*Tumblers* (Short).—Prize, A. Field. (Almond).—First, A. Field. Second, — Holmes. *Turbits*.—Prize, A. Field. *Antwerps*.—First, Second, and Highly Commended, A. Field. *Owls*.—First, A. Field. Second, — Waddington.

JUDGES.—Mr. E. Hutton, Pudsey; Mr. J. Beeton, Gillington; and Mr. J. Parkinson, Bradford.

PUDSEY POULTRY SHOW.

THE first Exhibition of Poultry and Pigeons, in connection with the Pudsey Floral Society, took place on Tuesday, August the 30th. The day was fortunately very fine, and the Show was well patronised, the press of visitors becoming so great in the evening that it was very difficult to obtain a fair view of the specimens exhibited.

The entries were very numerous, pens being shown by the best Yorkshire and Lancashire exhibitors, though some of the latter did not put in an appearance.

The class for *Spanish* contained a most excellent pen of chickens, which will doubtless stand high at many more shows. *Cochins* and *Brahma Pootras* were not as good as might have been expected. Most of the *Game* shown were in bad feather, but otherwise good. Of *Golden-spangled Hamburgers* there were pens not to be easily beaten; and the *Silvers* were also very good. *Golden-pencilled Hamburgers* were a good class, and an extra second prize was awarded for them. In *Silver-pencilled* Mr. Sharpe exhibited a pen containing a cockerel of rare quality; and the *Black Hamburgers* were both numerous and good. Of *Game Bantams* there were some excellent specimens; but the class for *Black and White* contained birds that, for the most part, were suffering from the moult. In *Bantams* the Any other variety class was the most interesting. The first prize went to a neat little pen of *Cochins*, the second to a perfect pen of *Silver-laced*, and the third to *Silbies*. *Polands* were first-rate.

Aylesbury Ducks were very fine, but the variety class for *Ducks* was much better. The first prize went to a perfect pen of tame-bred *Wild*, and the second to *East Indian*.

In single cocks the first, second, and fourth prizes fell to *Game*, the third to *Brahma Pootra*, and the fifth to *Spanish*.

Of *Pigeons* there were fifty-one entries, comprising excellent specimens from the lofts of Messrs. Clarkson, Edge, Hughes, Yardley, Cowburn, Haansbergen, and Jessop. The birds were well fed and watered during the day, and all were despatched to their homes the same night.

The pens used on the occasion were Turner's, of Sheffield.

SPANISH (Black).—First and Second, W. Cannan, Bradford. Third, W. R. Duxbury, Leeds.
COCHIN AND BRAHMA POOTRA.—First, W. Cannan. Second and Third, C. Lister, Mirfield.
GAME (Black-breasted or other Red).—First, J. Sunderland, Coley Hall, Halifax. Second, J. Hodgson. Third, F. Spencer, Pudsey.
GAME (Other varieties).—First, J. Hodgson. Second, J. Sunderland. Third, C. Lister.
HAMBURGH (Gold-spangled).—First, W. Cannan. Second and Third, C. Cowburn, Leeds. Highly Commended, J. Greenwood.
HAMBURGH (Silver-spangled).—First and Second, W. Cannan. Third, C. Cowburn.
HAMBURGH (Gold-pencilled).—First, W. Cannan. Second, J. H. Sharpe, Bradford. Extra Second, W. Harker, Cottingham. Third, G. Wilson, Pudsey.

HAMBURG (Silver-spangled).—First, W. Cannan. Second, W. Mand. Bingley. Third, J. H. Sharpe.
HAMBURG (Black, White, Buff, or Cuckoo).—First, W. R. Duxbury. Second, W. Cannan. Third, W. Barker.
BANTAMS (Game).—First, C. Lister. Second, J. Newsome, Batley. Third, W. F. Entwistle, Otley.
BANTAMS (Black or White).—First, W. Cannan. Second and Third, C. Lister.
BANTAMS (Other varieties).—First, J. Newsome. Second, W. Cannan. Third, C. Lister.
POLAND.—First, W. Cannan. Second, D. Illingworth. Third, W. R. Duxbury.
DUCKS (Rouen).—First, J. Harrison, Beeston. Second, W. R. Duxbury. Third, J. Newsome.
DUCKS (Aylesbury).—First, W. Cannan. Second, W. Jackson, Pudsey. Third, W. R. Duxbury.
DUCKS (Any other variety).—First and Second, J. R. Jessop, Hull (Wild and Black). Third, J. Oates, Halifax (Black).
SHOOT COCK.—First, H. C. Mason (Game). Second, J. Fell & Son (Game). Third, Lady Hawke (Brahma). Fourth, J. Sunderland (Game). Fifth, W. Cannan (Spanish).
PIGEONS.—*Carriers*.—First, J. Clarkson, Pudsey. Second, H. Yardley, Birmingham. *Pouters*.—First and Second, W. Hughes, Leeds. *Dragons*.—First, H. Yardley. Second, C. Cowburn. *Owls*.—First, J. W. Edge, Birmingham. Second, W. Hughes. *Antwerps* (Long).—First, J. W. Edge. Second, T. Ingram. (Short).—First, H. Yardley. Second, C. Cowburn. *Turbits*.—First, J. R. Jessop, Hull. Second, W. Hughes. *Tumblers* (Long).—First, C. Cowburn. Second, W. Hughes. (Short).—First, W. Hughes. Second, H. Yardley. *Pantails*.—First, J. W. Edge. Second, W. Hughes. *Other varieties*.—First, J. W. Edge. Second, T. Sagan, Leeds.

Mr. Thos. Dodds, Ovenden, Halifax, officiated as Judge.

POCKLINGTON SHOW OF POULTRY, PIGEONS, AND CANARIES.

FOR many years past the town of Pocklington has enjoyed a reputation for one of the best local shows in the kingdom. No effort that can be made to promote its success is ever neglected by the Committee of management; and the townsmen of Pocklington show, also, every possible inclination to support it by all the means in their power; and this year it has in a pecuniary point of view been a most successful meeting. The weather, too, has been as fine as could be desired.

Game were first on the list, and almost every bird in the moult; Mr. H. Adams' Duckwings and Piles were about the best in the Show, but they appeared to be used up for this season. In Red Game the judgment did not meet the approval of certain parties, but at the Dewsbury Show next day, the first-prize Pocklington pen was again placed first by one of the best Judges in England (Mr. Hewitt). The first-prize Game chickens were very good, and it will be seen that they again took first at Dewsbury. They were Black-breasted Reds. The prize pens of *Spanish* were very good, and shown in splendid condition. *Dorkings* were a moderate class; both first-prize pens were worthy of their position. The show of *Cochins* was one of the best ever seen at a local exhibition, almost every pen in the classes was highly commended. The first pens were gems; the cock in the first-prize pen took the cup for the best pen in the Show. Mr. Beldon's *Hamburgs* took first prizes in all the classes, they were first-class birds and won with ease. There was a nice show of Bantams, and the prize birds would win at almost any show.

The Ducks and Geese shown by Mr. Young, of Driffield, were far ahead of all others in their classes.

Pigeons were very good, but not easy to judge, as they were in baskets not open at the sides, consequently it was difficult to form a just idea of what the birds were like. It would be a great improvement if the Committee would engage Mr. Turner's pens both for Poultry and Pigeons, as under the present system the fowls cannot be seen or judged to advantage.

The following is the prize list:—

GAME (Black-breasted and other Reds).—First, H. Beldon, Bingley. Second, H. M. Julian, Hull. Highly Commended, H. Adams, Beverley.
GAME (Duckwing and other Greys).—First and Second, H. Adams.
GAME (Any other variety).—First and Second, H. Adams. *Chickens*.—First, T. Dyson, Halifax. Second, Master J. Charlton, Manningham. Highly Commended, H. Adams; H. M. Julian.
SPANISH.—First, H. Beldon. Second, S. Robson, Brotherton. *Chickens*.—First, H. Beldon. Second, S. Robson.
DORKING.—First, M. Hunter. Second, W. Watson, Bishop Burton. *Chickens*.—First, M. Hunter. Second, W. Watson.
COCHIN-CHINA (Buff or Cinnamon).—First, Master J. Charlton. Second, C. T. Bishop, Lenton, near Nottingham. Highly Commended, T. H. Barker, Hovingham. Commended, R. Carling.

COCHIN-CHINA (Any other variety).—First and Second, J. Bell, Thirsk. Highly Commended, G. Hair, Bielby; R. White.
COCHIN-CHINA CHICKENS.—First, H. Beldon. Second, T. H. Barker. Highly Commended, Bown & Briggs, Harrogate; T. H. Barker.
HAMBURG (Golden-spangled).—First, H. Beldon. Second, S. Camp-ling, Cottingham.
HAMBURG (Silver-spangled).—First, H. Beldon. Second, S. Camp-ling. *Chickens*.—First, H. Beldon. Second, S. Camp-ling.
HAMBURG (Gold or Silver-pencilled).—First, H. Beldon. Second, O. A. Young. *Chickens*.—First, H. Beldon. Second, G. Pears.
POLISH.—First, H. Beldon. Second, O. A. Young.
BANTAMS (Game).—First, R. M. Stark, Hull. Second, G. Holmes. Highly Commended, W. Lawrance, Eaglescliffe.
BANTAMS (Gold or Silver-laced).—First, H. Beldon. Second, J. R. Jessop. Highly Commended, R. M. Stark.
BANTAMS (Any other variety).—First, R. M. Stark. Second, J. Gawan.
DUCKS (Aylesbury).—First and Second, O. A. Young.
DUCKS (Rouen).—First, R. J. Wood. Second, T. H. Barker. Com-mended, O. A. Young.
DUCKS (Any other variety).—First and Second, J. R. Jessop.
GEES.—First, O. A. Young. Second, J. Metcalf, Pocklington.
TURKEYS.—First, W. Dörner, Warter.
GUINEA FOWLS.—First and Second, O. A. Young.
PIGEONS.—*Pouters or Croppers*.—First, H. Beldon. Second, S. Robson. *Tumblers*.—First, H. Beldon. Second, J. R. Jessop. *Barbs*.—First, W. B. Van Haansbergen. Second, H. Beldon. Highly Commended, H. Yardley. *Jacobins*.—First, H. Yardley. Second, S. Robson. *Pantails*.—First, J. R. Jessop. Second, T. Ellington. Highly Commended, T. Reynolds. *Trum-peters*.—First, W. B. Van Haansbergen. Second, F. Key. Highly Com-mended, H. Yardley. *Owls*.—First, H. Beldon. Second, H. Yardley. Com-mended, J. W. Edge. *Turbits*.—First, J. R. Jessop. Second, H. Beldon. *Carriers*.—First, S. Robson. Second, W. B. Van Haansbergen. *Any other variety*.—First, S. Robson. Second, W. B. Van Haansbergen.
EXTRA STOCK.—First, Master Eldridge. Highly Commended, Major Hill.

JUDGES.—Mr. John Crossland, jun., Wakefield; and Mr. A. Cattley, York.

PIGEONS AT THE DARLINGTON SHOW.

IN your last I see another letter from "A FANCIER" containing the information that Mr. Botcherby was the only Judge at Darlington, and charging me with jumping at conclusions. In reply to this I can only say, that I took the catalogue as my authority, thinking, naturally enough, that as it was printed and sent out by the authority of the Committee, its statements might be relied upon.

He also seems to think that I shall have some difficulty in verifying the statements made in my last respecting the cup bird. He does not say whether it is the age or the quality of the bird which he disputes. The age is not, I suppose, a matter of much consequence; but for all that, if required, I am quite in a position to prove my statement of his age to be correct; and with regard to the quality, the facts that he appears in the prize list wherever exhibited, and, that he was bred by Mr. Eden, from the Dun cock with which he has taken first prize at Birmingham for the last two years, are, I think, sufficiently conclusive.—J. I. D.

RECOLLECTIONS OF AN OLD FANCIER—No. 3.

RABBITS.

It is terribly hot even here on this hill. There is a dry-ness of the air and earth such as I never remember to have felt before. Ponds in the village are as dry as turnpike roads, springs are no longer running, well after well is fail-ing, and an elastic springy lawn is a thing of the past. There is another evidence of the heat which is new to me, it is that the shadow of one of the finest Elms in England gives little alleviation to our misery. A tree is now too thin a shade, nothing but a block of building, (e.g., on the east side of a house of an afternoon) is thick enough to protect from the blazing, broiling heat.

It is just such weather as is described by Tennyson in his "Mariana in the South."

"With one black shadow at its feet,
 The house through all the level shines;
 Close-latched to the brooding heat,
 And silent in its dusty vines;
 Nor bird would sing, nor lamb would bleat,
 Nor any cloud would cross the vault,
 But day increased from heat to heat."

If I read these lines on Christmas day I should feel hot. But if it is oppressive here on this hill, what must it be in Bath, that lovely yet hot city, built as it is, on the inside of a circlet of hills, teacup-shaped. I turn my telescope and bring the Bath hills near to me, and I almost fancy I hear the good citizens frying. My friends the working gardeners

tell me that last week labouring within high-walled gardens was something terrible to bear. What must this heat be in Fleet Street? even here it induces great idleness. Luther tells a tale of a lazy monk too idle to say his prayers, and who was accustomed to repeat the alphabet, and then add, "Take, O Lord, these letters and put them together even as thou wilt." Let us hope that he did this only in the dog days—I am fond of finding excuses for every one. Now, I feel inclined instead of writing, to repeat the letters, and ask the good genius that presides over "our Journal," to put them together as he will, but in vain.

"If you want a thing done you must do it yourself, John,"

says Longfellow.

Now, if I could imagine any one (well there might be some dear schoolboy fond of pets), who was kind enough to relish, and remember with pleasure two former papers by "WILTSHIRE RECTOR," entitled "Recollections of an Old Fancier," let such a kind individual be assured that there are other recollections to come on in due time, besides Nos. 1 and 2. There always lies before me, on my study desk, a slip of paper entitled "memo," and the first line of the memoranda is this—"unbaptised children." Now, a little slip of paper so entitled is in its turn filled up with various items, used, and torn up to give place to another, to be in its turn filled, used, and torn up. But each and every succeeding bit of paper is headed with "unbaptised children." For why? there are always some to be baptised. So of this "Recollections of an Old Fancier," there will always be some coming on.

I went into Rabbits at an early age, too early, for like many children's first pets, I fear my first pair of Rabbits were starved. N.B.—Little children if they have pets given to them, should also have a servant put in charge of them. The first Rabbits died; they came too soon to be appreciated, a boon unvalued because premature. But in due time, in the earliest of breeched days, pet fever set in. I will tell you how it came on, what induced it, and how the first symptoms showed themselves. Five-and-twenty years ago, books for boys, really sensible books—were very few, plenty of books of the moral tale kind, full of long words of Latin derivation, written in the true Johnsonian jack-boot style, unreadable and unintelligible to a boy. These were what one's maiden aunts gave one on birthdays, and very clean they remained all their days. Thorough jolly books, for all boys are jolly, were rare indeed. There was dear old "Robinson Crusoe," to be sure; but Capt. Mayne Reid had not then written, neither had Mr. Atkinson brought out his "Boy Naturalists." I quote from memory, perhaps I am not quite right in regard to the title. Neither, again, did one's present-giving relatives and friends often come up to the tune of a five-shilling book. One cantankerous old gentleman, under an obligation to my father, did give me a five-shilling book once, but it was an apple of Sodom, for on opening the parcel it proved to be "Blair's Preceptor," and I wished it far enough, for he said in his note, that he expected me to read it (read a school book in play hours, indeed!), and that he would examine me in it. Well, the fates were propitious to me once when a boy, at any rate. Friends coming from a neighbouring city actually brought a copy of the then newly-issued "Boy's Own Book," price eight shillings and sixpence—think of it, eight shillings and sixpence! I got it only by a shave, for it was intended for my elder brother, but happily was considered too juvenile for him, so it was to be my book, and he was to read the "Scientific Recreations." It was mine, my very own. I have the precious volume now, and my own boys delight in it. Well, henceforth, from that lucky day, that glorious book was my library, my vade-mecum. It went out fishing with me on summer half-holidays; it cheered dreary November evenings. Oh! blessed little square book, to a boy well nigh inexhaustible. But the most delightful part to me was "The Fancier," it made me a fancier, and I am a fancier still.

Singing birds you have heard about; silkworms I cared not for after the first essay; but Rabbits, so comestable by every boy, and so great a source of delight, I did love. I began humbly, but improved in time. My spare hours were employed in making hutches out of old boxes, and I looked with pride upon my long row of them, fronted with iron

hooping (galvanised wire had not then been invented), with tin troughs made by my dear old tinker crony. My Rabbits paid, too, for being a day scholar at a grammar school, I was able to supply the less fortunate boarders with my spare stock. Of course, their food came out of the governor's garden and corn bins. Great was my delight at every improvement. My stock rose thus—ill-marked and common, then better marked, then Smuts, and Butterfly Smuts, then Half-lops, Oar-lops, and, triumph of triumphs, Full-lops. A certain doe, black and white, and perfect in dowlap, colouring, and shape, is well remembered by me, as I placed her for exhibition on a truss of hay with her little ones around her.

Nor let my grand buck "Sir Harry," be forgotten, an enormous fellow, yellow and white, and dark-nosed. How he drubbed the cat, threatened the dog, and almost beat life out of a Dorking cock. My Rabbits had reached perfection point, just as stage coaches had when railways came in, and having reached it, they gave way to a new fancy, that of Pigeons, but how that happened my next Number shall tell, which, it may be, will be less of a Number for schoolboys than this.—WILTSHIRE RECTOR, August, 19th.

RABBITS.

Why is it that while so much pains are taken in the improvement of poultry and Pigeons, Rabbits are left almost unnoticed? Are not the Ostend Rabbits, or what are still better, the Patagonian Rabbits, worth a little care and trouble? A few hutches may be kept where there is no room for fowls, and the Rabbits are so healthy and pleasant to feed, that it is not only a delight to have them, but it saves many a butcher's bill.

A Patagonian Rabbit when only ten weeks old weighs from 8 lbs. to 9 lbs. They are ugly in appearance, having a large, broad head, and a single lop, but their usefulness quite makes up for their want of beauty; and if elegance and beauty are required, then have those lovely little creatures the Himalayas as well.

The large Rabbit consumes a great quantity of food, and I should like to know if such would thrive well fed only upon soaked grey peas and fine middlings mixed with white pea haulms, as when fed with oats they waste so much.—HENLEY.

[Rabbits have not been left unnoticed in our pages, and the contributions to them on the subject have been collected and published in a little volume, entitled "The Rabbit Book," which you can have free by post from our office for seven postage stamps. It contains full directions for feeding and managing, with portraits taken from live specimens of the principal varieties.]

WINTERING THE CUCKOO.

In answer to a correspondent who asks information how to keep Cuckoos through the winter, I may state my experience, having kept one until November; I lost it then by its being choked. I fed mine on small pieces of liver, mutton, and wasps, but the bird seems to prefer the young grubs. I think if your correspondent can keep up a supply of grubs or beetles with the raw mutton and liver, he may manage to keep his bird through the winter.

On dissecting the gizzard of the Cuckoo, the old birds I find have in it a quantity of hairy caterpillars and beetles. A bird-preserver in this locality of no mean experience, has now a Cuckoo, and he tells me that he is confident that Cuckoos sleep for most of their time during the winter, and that this sleeping will not take place until the gizzard is quite full of caterpillars and beetles.

I have shot Cuckoos this season to dissect the gizzard, and I have found them to be as my friend says. He seems quite sanguine of success, and I shall watch his experience, and if he succeeds until November or December, I will communicate the result to THE JOURNAL OF HORTICULTURE.—R. D., Seaham.

To KEEP HONEY.—M. Sands, Orange county, N.Y., directs to heat strained honey to the boiling point, and store it in

covered jars, where it will keep without candying. To prevent danger of burning, set the vessel in which it is to be heated into another containing water.

BEE-MANAGEMENT AND FOOD.

You or some of your numerous subscribers could, I feel sure, tell me the plainest, simplest, and cheapest method of managing a few stocks of bees. I have too great a dread of their stings to become a skilful apiarian: therefore the expensive and complicated hives I see generally used would not suit me. The working men I have in my garden know nothing of the proper way of handling bees beyond shaking down a swarm from a bough, and putting the hive on its stand afterwards; and it would take no small share of persuasion to induce me to enter the domains of my bees until at least twelve hours after that exasperating operation has been successfully concluded. In fact, I only endure bees for the sake of honey, which is almost a necessity in a remote country house like mine. I find the common straw hive does not suit my bee-house, besides having to sacrifice the insects when I want their stores.

I wish, also, to gain some information on the best flowers to plant for bee food. I have tried many, but found the bees seemed to like nothing so much as mignonette—not even white clover. Borage they do not much frequent, and few florists' flowers seem to please their taste. The heliotrope and *Oxalis floribunda* are exceptions. There is a little blue plant, of which I have a small bed, which they frequent. I send a bit of it, and will be obliged to you for its name. Some persons recommend me to sow patches of buckwheat near the house: is it a bee plant?

I once knew an old gardener who kept a large supply of bees, and was most successful in obtaining quantities of honey from them. He made three or four hogheads of delicious metheglin (or mead) every year, besides all the combs he kept for the use of his employer's family. He fed his bees in winter on small birds, roasted well, and basted with honey or strong syrup of sugar and treacle. I have seen him take out the bare skeletons from his hives, therefore the bees must have eaten the meat off the bones. He used to say nothing agreed so well with bees as roasted birds. I shall wait with anxiety a reply through the columns of your Journal.—RUBY.

[With your dread of bees and the ignorance of your assistants, we cannot advise any attempt to advance upon the old and well-understood system of management. Destroy swarms as a rule, and you will insure young queens and obtain fine honey, but renew your old stocks by the substitution of swarms every five or seven years. If your bee-house is not suited to common straw hives, have it altered; for none other are so cheap or so well adapted to your purpose. The specimen you enclose is *Salvia argentea*, Silvery-leaved Sage. Buckwheat forms excellent bee-pasturage, but should be sown in large quantities to be of much service. Situated as you are, however, there is little doubt of your bees doing well, and we should deem it labour lost to cultivate expressly for them. We have been told that in China they bury bees during winter, and also bury a dead fowl with each hive. When exhumed in the spring, the bones of the fowl are stated to be picked as clean as those of the small birds you mention!]

UNITING BEES—TAKING THE HONEY FROM PARTIALLY-FILLED COMBS.

I HAVE TWO "casts" so light that I doubt whether any amount of autumn feeding would carry them through the winter. If I unite them to other stocks, what shall I do with the brood-comb, if any, and what with any honey there may be in the other comb? The two stocks or May swarms of this year to which I propose to unite them, are in Stewarton-hives; what would be the best plan to adopt in carrying out my proposal? These swarms have filled only one box completely, and a second box but partially, what had I better do with these second boxes? Shall I leave them as they are, or remove them? and if the latter, what shall I do with any honey there may be in them? If the former,

would not the honey in them help to support the bees from the casts that I propose to put to them?

In the next place, I have some partially-filled combs in a glass super on a Woodbury bar-and-frame hive, how can I extract the honey out of them without breaking them up? Any information respecting the above would greatly oblige. Please to understand that I am quite a novice at bee-keeping, and regard my questions as the natural growth of necessary ignorance.—T. R. D.

[You are not likely to find any brood in either of your weak casts at this season. Whatever honey remains will be fit for table purposes, to which we should apply it. By cutting off the empty part of the combs in a straight line they may readily be attached to either bars or frames, and should be carefully preserved for use next season. Read Mr. Woodbury's articles on driving and uniting bees, in Nos. 130 and 144 of THE JOURNAL OF HORTICULTURE, and follow the instructions therein given.

We conclude that it is the lower compartment which is but partially filled in your Stewarton hives, and if so should leave them as they are.

The only method of appropriating the honey in partially-filled combs without breaking them up altogether, is to slice off the cells on both sides, leaving the central foundations uninjured, and fixed to the bars for future use. Our esteemed correspondent, "B. & W.," once informed us that by adopting this plan he had had the same combs filled thrice in one season.]

THE BEE SEASON.

THE summer of 1864 has been a very fine one for bees, but, in my opinion, inferior to the last, as the flowers were languishing in July for want of moisture. I have noticed, however, a great appearance of honeydew in August: this generally produces honey of rather a coarser character than from white clover or other fine bee pasture.—H. W. NEWMAN, *Hillside, Cheltenham.*

APIARIAN VARIETIES.

FOUL BROOD.—I was very sorry to hear of the apiary of "A DEVONSHIRE BEE-KEEPER" being so affected, and I have no doubt that it would have been entirely destroyed had it been in the hands of any one but himself; and for my own part I thank him for the straightforward manner which he gave it to the world. I have some experience and information on the subject, which I hope to communicate at some future opportunity.

QUEENS IN 1862.—In the first place, the great Dzierzon and "A DEVONSHIRE BEE-KEEPER" gave it as their opinion that a young queen would not take her wedding flight with the thermometer lower than 70° or 75°.* The low temperature at the time they should have been out gave rise to some misgivings and uneasiness on my part, as the sheet was as follows:—52°, 54°, 56°, for weeks; but on the 7th of July came a little sun, and the register was 60°. I was at my hives in an instant to see if any of the virgins would make their exit. In a few minutes No. 1 made her appearance and took wing, but returned in about five minutes unsuccessful, but stayed upon the edge of the alighting-board a few minutes and then took flight again. As near as I could tell she was about twenty minutes in returning, with evident signs of impregnation, and laid eggs in six days all right, with the thermometer at 61°. No. 2 was out at the same time; I did not see her return, but she had been successful, as her young ones were out at the same time as those of the other. She was in a straw hive, which I could not inspect. I should have said that No. 1 was twelve days after swarming, and No. 2 was nine days.

My next performance was with queens at the time of taking them up. I had some driven bees without a queen three days which became very uneasy, so I gave them one that had ceased breeding some months, and marked her. I gave her to them at the top without any preparation. They received her with the greatest kindness, and all was peace;

* I still hold to the same opinion. Was not your thermometer in the shade, and did it not therefore register a lower temperature than the sunny atmosphere which inclined the queens to hearken to the call of love?—A DEVONSHIRE BEE-KEEPER.

two hours after I gave them a young one in fine order. I anticipated the usual excitement, but all was peace. I expected to have one cast out, but no, and upon examination the unfruitful one had disappeared without any of the usual signs. These are facts—take them for what they are worth.

THE DISTANCE QUEENS AND DRONES FLY ON THEIR NUP-TIAL TOUR.—The introduction of the Italian stock to this district has enabled me to give some information upon this important subject. In the first place I must state that there is not one of the young queens from the Italian stock impregnated with an Italian drone, therefore all are cross-mothers; and, strange to say, out of twenty young black queens within half a mile of the old Italian stocks (the young ones removed), not one has been impregnated by the yellow bees, but at one mile up to three and a half miles distant thirty per cent are cross-mothers, and many of them are better marked bees than from the Italian queen with a black drone. I see that in another remove there is scarcely a trace left.—NORTH.

BEES IN SURREY.

As there are many readers of THE JOURNAL OF HORTICULTURE who, like myself, take an interest in anything relating to bees, I am induced to give you the results of my first manipulation, or deprivation of honey from my collateral-boxes.

In the first place, I live only four or four and a half miles from London; not one of the most open positions for an apiary, being surrounded with houses on all sides, and my bees having to go a long distance to collect their stores, consequently it takes a longer time to fill the boxes than it would do if placed in an open country. On the 6th of May I opened one of my collateral-boxes, No. 1, for the increasing population, and on the 20th of June I opened No. 2 box, to let the industrious labourers construct more combs. On the 16th of July, I took off box No. 1, which had all the cells sealed, except about half a dozen on one small comb, without a single grub, or egg, or brood in any stage whatever, which I attribute to the ventilation in my hives. Box No. 2 is three parts full, independent of the middle box or pavilion of nature, as Mr. Nutt calls it, which is quite full. On weighing box No. 1, I found it contained 20 lbs. of honey, after the box and wax had been deducted from it; and I have left in the other boxes 30 lbs. more. But, as the weather has been so dry, I find the bees do not collect so much honey; and, seeing your advice of August 9th to a correspondent, I consider it most prudent to let well alone, as the stock is very strong. I may perhaps ruin my hive for the sake of a few pounds of honey, which will not be wasted by the bees if they do not require it.—T. S.

CHARACTERISTICS OF ITALIAN BEES.

I WOULD state that the result of my experience regarding Italian bees, is, their disposition to labour far exceeds that of the common bee; they commence work earlier in the morning, and work later in the evening, and on a cool day, when the common kind are not to be seen they are at work. It seems that they prefer a northern clime, for in their native country it is said they are only found in the north, while the common bees are found in the south. The queens are larger and more prolific than common ones, and are inclined to swarm oftener and earlier. The Italian bee differs from the common one in being larger, and of a light chrome yellow colour, with light brimstone-coloured wings and two orange girths immediately behind the wings. Working bees as well as drones are thus marked, the girths upon the drones are scolloped, and they attain an astonishing size. The queens are marked a good deal like the workers, but much brighter, and on account of their size and colour, are very easily found in a swarm. The bees are almost transparent when the sun shines on them, and when bred in comb of their own building, are larger than when bred in comb of common bees, as their own cells are larger. I have proved beyond a doubt to my mind, that they will gather from one-third to one-half more honey than common bees. It is said of them that they will gather twice as much, but I only give them credit for superiority over the common ones, in so far

as I have proved from practical observation. They seem to gain the most on common bees, in the latter part of the season. It is said they can gather honey from red clover: I have not paid attention to this quality in them, and therefore, cannot speak of it from my own knowledge. Some of my neighbours have told me they have seen them gathering honey from it; if so, this will account in a great measure for their gathering more honey than common bees.

They are extremely amiable, as unprovoked they never sting. There is one trait in their character, which I do not admire much, although it proves their superiority, and that is their propensity for stealing; if there is a hive of common bees near that are weak they are almost sure to be robbed, and on the other hand, common bees find it useless attempting to rob Italians, as they can repel three to one. My experience with them is, they are superior in every way to common bees.—H. HOLDEN, *Mirickville*.—(Canada Farmer.)

DESTROYING WASPS.

YOUR correspondent from Dorsetshire inquires how wasps are to be destroyed. First of all, squib them with gun-powder where their nests are, and dig them out; almost an impossibility this season to find them all. I have found Millington's wasp-glasses very effective in a small way; they must be about one-quarter filled with brown sugar and water, or a little small beer. I have emptied these glasses generally containing from 100 to 200 wasps and one or two blue flies. If honey is used in the glasses, then the bees are entrapped in large numbers themselves; but when sugar and water and a little beer are used, I have never found a single hive bee caught, although the glasses are placed within 2 feet of the hives; and during the late hot dry weather the wasps seemed quite ravenous after liquid food.

I cannot quite approve of Mr. Taylor's mode of placing barleysugar; for, though it attracts the bees in numbers, they are a good deal too busy with the candied sugar to notice the wasps much, and I am inclined to think the offer of the sugar takes the bees off their guard. Mr. Taylor is, however, a steady apiarian in all other respects, and in his case probably the passage into the hive must have been quite blocked up by the bees.—H. W. NEWMAN, *Hillside, Cheltenham*.

TO PREVENT YOUR BREAD BEING BITTER.—Add a teaspoonful of magnesia to the yeast just before you use it.—S. M.

OUR LETTER BOX.

USEFUL FOWLS (Ruby).—A Dorking cock with your cross-bred Cochins pullets, will produce short-legged, full-breasted chickens for table, and the pullets will lay in the winter.

WASHING THE PLUMAGE OF FOWLS (Cochin).—Buff Cochin plumage does not want washing. Silver-spangled Hamburgs should be washed with soap and water. The bird should afterwards be put in a basket with soft straw, and either placed in the hot sun, or before a fire, till the plumage is dry.

NANKIN BANTAMS.—A "CONSTANT READER" in No. 178 asks where he can obtain some of these birds. I had not seen any for years, until when passing through the village of Seagry last February I saw a considerable number of them in a field adjoining a pretty cottage. I only caught sight of them at a distance, and for an instant only, from the top of an omnibus; but I believe I am correct as to the sort. I understand the owner's address is—Mr. Sampson, Seagry, near Chippenham, Wilts.—WILTSHIRE REGION.

POULTRY-JUDGING (H.).—Before we insert your communication you will oblige us by furnishing us (not for publication), with the name of the Show and Judge.

PIGEON JUDGING AT NEWCASTLE AND DARLINGTON (A. B. C., and the Compiler of the Darlington Schedule).—Enough has been now said on the subject, and the gentleman who made the awards we should think is not likely to appear again as a judge of Pigeons. We would also remind our correspondents that attributing misdoings and bad motives only exasperate, and have nothing to do with the only question at issue—Were the Pigeons correctly judged?

DEFECTIVE RABBIT (C. O.).—Sell him or eat him, and buy another.

PREPARATION OF WAX-HIVES (B. B.).—The kettle for rendering combs into wax could readily be manufactured by any tinsmith from the description we quoted from Dr. Bevan's work, but we know no one who keeps such things for sale. The hive figured in No. 178 is of Canadian manufacture, and is not obtainable in this country. We believe the Woodbury frame-hive, made by Messrs. Neighbour, possesses all its advantages, whilst it is better adapted for English use. The society you refer to has long been defunct.

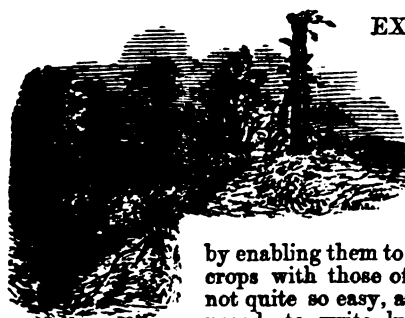
BORAGE FOR BEES (A. B.).—You may sow in September, and again in March or April, which will secure a succession of flowers. We are glad you have succeeded so well.

WEEKLY CALENDAR.

Day of Month.	Day of Week.	SEPTEMBER 12—12, 1864.	Average Temperature near London.			Rain in last 37 years.	Sun Rises.		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock after Sun.	Day of Year.
			Day.	Night.	Mean.	Days.	m.	h.	m.	h.	m.	h.	m.	h.		m.	s.
12	Tu	Golden Spurnwort flowers.	67.8	45.9	56.5	17	34	af 5	18	af 6	44	4	10	2	12	4	19
13	W	Horse-Chestnut leaves change.	66.8	46.3	56.5	19	35	5	16	6	16	5	32	3	13	4	40
14	Th	Fortail Oat Grass ripe.	67.2	46.5	56.9	19	37	5	13	6	44	5	57	4	13	5	1
15	F	Lime-tree leaves turn yellow.	68.2	47.9	58.0	15	39	5	11	6	13	6	20	6	15	5	23
16	S	Sycamore leaves fall.	69.0	48.0	57.5	14	40	5	9	6	41	6	43	7	16	5	44
17	Su	17 SUNDAY AFTER TRINITY.	68.7	47.1	58.9	17	42	5	8	6	14	7	4	9	17	6	5
18	M	Goldfinches congregate.	68.8	45.4	56.1	18	43	5	4	6	52	7	30	10	18	6	26

From observations taken near London during the last thirty-seven years, the average day temperature of the week is 67.5°, and its night temperature 46.4°. The greatest heat was 84° on the 17th, 1843; and the lowest cold, 20°, on the 17th, 1840. The greatest fall of rain was 0.90 inch.

MY ORCHARD-HOUSE.—No. 9.



EXPRESSED in a former paper my conviction that a statement of the dates of fruit ripening in orchard houses would be of great value to amateurs as well as to gardeners,

by enabling them to compare their own crops with those of others. As it is not quite so easy, as is generally supposed, to write lucidly, and at the

same time pleasantly, on horticultural matters, I shall confine myself, in this paper, chiefly to these important details of orchard-house culture. The point I wish to bring to notice is, that orchard-houses—judging, however, chiefly from my own (one of the oldest in England)—have the desirable quality of advancing, steadily and gradually, the date of fruit-ripening. I have already, in the communication above referred to, stated this date in the case of several of the fruits which I cultivate, but I will now enter upon the subject at greater detail.

To begin with the earliest Peaches. The Red Nutmeg, a perfectly valueless fruit, in four years only advanced five days, ripening on July 5; Petite Mignonne, a delicious little Peach, but not worth cultivating, ripened on the 17th of July, gaining eleven days in four years; Early York, the queen of early Peaches, has advanced from August 1, in 1861, to July 4, in this year; Canary, American, from Georgia, has gained twelve days in three years, ripening July 11th; Golden Purple, also an American Peach, has advanced fifteen days, ripening on the 20th of July; Alice is nearly stationary; Acton Scott much the same, both being worthless for special use; Vineuse de Fromentin had gained thirteen days in three years, and again lost them by being changed to the late house (this fruit is unworthy of notice); Stump the World, a grand American, has only progressed three days in as many years, ripening August 15th; Honey, ripe August 10th, 1862, was ripe on July 21st of this year. Brugnion Imperial Nectarine, five days gain, ripe August 7th; Rivers's Orange has gained eighteen days, ripe July 28th; Du Tellier's, seven days, ripe August 9th; Duchess of Oldenburg, seven days, ripe August 9th; Chauvière, seventeen days since 1862, ripe August 11th. These are all fine fruits, and worthy of cultivation. Chauvière is especially good—large, well coloured, flavour aromatic, and bears abundantly. These dates are gathered, not from solitary specimens, for of some kinds we have ten or twelve in various forms of training. Stanwick Nectarine and Stanwick Seedling have advanced somewhat also, but not so as to form any opinion. Stanwick Seedling is a magnificent Nectarine, of the same flavour as the parent, and colours well; ripe, this year, August

No. 181.—Vol. VII., New Series.

17th. A most valueless Peach is the Chancellor: that has advanced ten days, but it is to be condemned. Walburton Admirable is nearly stationary; ripe August 30th. A handsome Peach, but too pale generally to please the dealers' fancy. Early Crawford was ripe July 30th. This very fine Peach is also out of favour with dealers. These pretend that only high-coloured fruit, like Royal George and Grosse Mignonne, are saleable. It is well that my brother victims should be aware of this, and also that all yellow Peaches are said to be at a discount. It is also "passing strange" that whenever any particularly valuable baskets are sent up the markets are at once "flooded with small fruit, or Peaches from the South of France;" so that we become public benefactors without intending it, even by means of these houses.

I come now to a point on which I feel somewhat perplexed. It is, that however agreeable and profitable it may be to have nice saleable July Peaches by reason of the house advancing their maturity, the same cannot be said when Peaches intended by Nature to succeed the out-door ones are forwarded so far as to become ripe at the same time. This is most disagreeable, and I have immense trouble to retard the ripening of the fruits. We have never extensively practised removing Peaches to a colder atmosphere so as to check them, because this requires care and time, so that I cannot speak of this plan. I find, however, the regular October Peaches gradually becoming mid-September ones. Pavie de Tonneux, for instance, ripe October 1st in 1861, October 4th in 1862, October 1st in 1863, is now ripe! It is a splendid clingstone of grand shape and colour, reckoned second-rate in flavour in the best French catalogues, but very good by those who, like me, prefer clingstones. Thomas's Late, a very great acquisition, sent me by Mr. Rivers, has advanced from October 8th in 1862, to October 1st in 1863. At this rate it may ripen by the equinox in a year or two. I place great dependance on Tardive d'Espagne for lateness, due October 10th; but even this has been removed to a cold corner. Baldwin's Late, another American from Mr. Rivers, ripened on November 2nd in 1862; but, alas! on October the 20th last year. I fear we shall never have good November Peaches. The October ones are, however, really good, and among the new varieties soon to be introduced there may be more such.

From the foregoing rough sketch, from which many are omitted, it will be seen that the period of the fruit's ripening has really been accelerated, and this gradually, as could also be shown. No doubt, however, having a second house with a different aspect would remedy much of this evil; for it cannot be too often insisted on that it is in the succession of fruit that orchard-houses especially shine. All our out-door Peaches were gathered in three weeks. During that period there was much waste. A great many Peaches also fell in the houses from the violent winds, and the overcrowding of the trees rendering pruning very hazardous. Much wider houses would have been better in any case. A path round by the front is very useful.—T. COLLINGS BRÉHAUT, *Richmond House, Guernsey.*

No. 832.—Vol. XXII., Old Series.

BULBS.

CATALOGUES of Dutch and other flower-roots now making their appearance remind us that a few hints on the cultivation and the choice of bulbs may be useful to those who have had but little success in their management, or who wish to enjoy sweet and beautiful flowers in winter. I shall divide the subject into three parts—1st, Bulbs for forcing. 2nd, For flower-garden decoration. 3rd, Greenhouse and stove bulbous plants.

1st, BULBS FOR FORCING.

Of those none are more beautiful than the far-famed Guernsey Lily, and the not less beautiful Belladonna Lily (*Amaryllis belladonna*). The Guernsey Lily has a flower of the most brilliant scarlet imaginable, looking in the sun's rays as if dusted with gold, beautiful in the extreme, and appearing at a time when flowers are scarce—October and November. The Belladonna Lily has a charming whitish flower flushed with rosy purple. They should be potted at latest by the middle of September, before the scapes are too far advanced, or they are liable to be injured in travelling, and will not bloom finely. Three to five may be planted in a six-inch pot, providing efficient drainage, and employing a compost of good, sound, and rather strong loam, with a little sand intermixed. I usually insert them to the neck in the soil, and after watering them place in a cold frame on coal ashes until the first week in October, admitting air day and night, and protecting them only from heavy rains. When brought on in a warm house, and at a distance from the glass, they bloom poorly, and are not capable of supporting the beautiful flowers on account of the long flower-stem. To bloom well they should be kept near the glass, and have abundance of air, but no more heat than is necessary to exclude frost. A fair amount of air, but not drying currents, is essential to success, and not less so is a light situation. They do moderately well in sitting-room windows, and are beautiful objects for autumn decoration generally. Inserted in moss or coco-nut fibre refuse they bloom finely, providing it be kept moist; but the bulbs are of no use afterwards, nor are those potted after the flower-scape appears. To grow them and bloom them are two different things, of the latter of which I shall have occasion to speak hereafter.

Presuming them to have been potted early in September, I give enough water to keep the soil thoroughly moist, and place them in a cold frame, where they will require to be near the glass, and have a free circulation of air. By the last week in September the scapes will be far advanced for flowering, when they may be removed to a shelf in the greenhouse; and duly supplied with water, they bloom finely in October and November. Copious supplies of water are necessary to prolong the blooming. Those who have not grown these bulbs have a treat in store.

HYACINTHS.—Domestic flowers in every sense, thriving in the smokiest and busiest thoroughfares of towns nearly as well as they do in the best-constructed horticultural buildings, they are unsurpassed for their beautiful colours, form, and fragrance, and on this account they are deserving of every care, and ought to find a home in every household.

The first essential to their successful cultivation is the selection of bulbs, which should be clean, healthy-looking, and heavy and firm. It is desirable to choose those bulbs that have the scales covered with a thin tissue-like coat, passing over those with the scales perished for some distance from the crown, and having a canker appearance. Round medium-sized bulbs are the best, and if they have the apex closely filled up with the scales, and the base of the bulb, from which roots are emitted, free from mouldiness, flat, but not much sunk, with a firmness to the touch and heavy for their size, these are the sort of bulbs. Some kinds, however, produce large roots, but even of such those bulbs having a firmness and heaviness, which the large open-scaled roots do not possess, are to be selected in preference. Large, loose, light bulbs seldom give close symmetrical flower-spikes, but have more foliage, and taller open spikes of bloom. Many kinds have smallish-sized roots, and these almost invariably afford the best spikes of bloom. It is also desirable to procure bulbs early, quite as much to secure them good as to have them potted in due time for an early bloom; and another grand point in ordering them

early is to obtain roots that have not been exposed, perhaps for weeks, to the influences of the atmosphere in the seedsman's shop or window. The exposure of the bulbs to light and atmospheric changes exerts an injurious influence upon them. After they are purchased it is desirable to keep them, if they are to be retarded, in the thin paper in which they are wrapped and in the bags, packed in chaff in a cool, not light, and dry situation. A warm place renders the roots liable to premature growth of top, and a moist one causes the emission of roots.

The next question is the choice of sorts; of these the single varieties give the largest spikes, and, unlike the double, invariably do well in water. Some consider the single varieties the most beautiful; but they might as well say a Dog Rose is superior to the best of the Hybrid Perpetual Roses. The single are the most numerous, which is only what might be expected; for double sorts are more difficult to obtain than single. I shall only give a selection of the very best. Those marked thus * are the best for early forcing and also for water; † fine for exhibition.

DOUBLE BLUE.

- Laurens Koster, indigo; long spike; bells large and closely arranged.
- Van Speyk, light blue, striped with deep blue; fine spike; very large bells.
- *Paariboot, bright pearly blue; fine bells and spike.
- Paquin, pale blue; fine spike; large bells.
- *Comte de St. Priest, light blue; fine bells; large spike.
- Bloksberg, fine marbled blue; large bells, and charming spike. A good old variety, not yet beaten.
- Garriek, intense deep blue; excellent spike; with large bells closely arranged.
- Rudolphus, sky blue; good truss; bells fine, but rather thin.
- Prince Frederick, porcelain blue, or lilac, shaded; large bells; but moderate spike.
- Sir Colin Campbell, light shaded blue; immense bells; fine spike.
- General Antick, light blue, a colour not much wanted; but amply compensated for by the fine spike and good-sized bells.
- Bouquet Constant, porcelain blue; nice bells, closely set on a very good spike.
- Othello, very dark, with a small spike, but large bells.

DOUBLE RED.

- *Duke of Wellington, pale rose; large bells, finely set on a good spike.
- *Jenny Lind, deep rose; nice bells; good spike.
- *Milton, fine deep red; large bells, and good spike.
- Czar Nicholas, rose; good spike; fine bells.
- *Waterloo, pink at first, changing to deep red; nice spike and fine bells.
- *Noble par Mérite, rose, striped carmine; large spikes and immense bells.
- Groot Voorst, pale rose; nice handsome bells; moderate spike. An old variety, not yet eclipsed.
- *Princess Royal, good spike; fine bells of the loveliest rose, striped with deep pink.
- †Koh-i-noor, fine salmon colour; and fine bells and spike, just what a Hyacinth ought to be in form.
- *Bouquet Royale, deep rose, with a pink eye; good bells, and fine spike.
- Regina Victoria, rosy pink; fine spike, and large.
- *Susannah Maria, remarkably fine spike, well set with charming salmon rose bells.

DOUBLE WHITE.

- *La Tour d'Auvergne, very fine pure white; large spike; nice bells.
- Ne Plus Ultra, large bells and spike; but not so compact as desirable, nor equal to many others.
- *Prince of Waterloo, exquisite; large bells and spike.
- Sir Bulwer Lytton, a bad white with a purple eye; large spikes, and such monstrous bells—novel, certainly, but not a move in the right direction.
- Anna Maria, another bad white, being but a blush with a pink eye; with a moderate spike.
- Sceptre d'Or, good pure white; but only moderate spike and bells.
- La Vestale, beautiful white, with a goodly spike; but bells below par.
- Don Gratuit, good white; large bells, and nice spike.
- *Triumph Blandina, blush, improved by a dark or deep pink eye; with nice bells and a good spike.
- La Déesse, white; moderate bells; fine spike.

The raiser of good double whites or good double Hyacinths of any colour would make a fortune, and I hope ere long to report an advance in the double varieties similar to what has taken place in the single kinds.

SINGLE HYACINTHS.

What a host! but not one too many, only let them be as good as General Havelock (black), Lord Palmerston (blue), or Robert Fortune (mauve); but no more of your lanky Pienemans.

SINGLE RED.—All are fine for exhibition.

- Joséphine, brilliant vermillion, the best red to be found in Hyacinths; nice spike; fine bells.
- Cavaignac, salmon, with deep rose stripes; fine bells, and large spike.
- Howard, orange crimson.
- Circe, pink, striped with carmine; bells of good substance, just what is wanted in double Hyacinths.
- Madame Hodgson, pale pink; nice bells; and such a fine spike, the form being so beautiful.
- Pellissier, scarlet; beautiful closely-arranged bells on an immense spike. Everybody will grow this when the price is lowered.

Sultan's Favourite, a very pale rose, which would be worthless but for the deep pink stripes, and the number of flowers on the large spike.
Lady Sale, deep red, suffused with purple, and a light eye.
Victoria Alexandrina, very large bells, of an intense crimson, neatly set on an immense spike.
Queen Victoria, pale pink, bright red stripes; good bells, compactly arranged.
Von Schiller, salmon pink; good in everything.
Florence Nightingale, pale pink, with carmine stripes. Fine.

SINGLE BLUE.

Bien Aimable, violet shaded blue; fine bells, beautifully arranged on an immense spike. Not a finer Hyacinth in cultivation.
Bien Mourant, fine bells and spike.
Argus, blue, with white eye, the tube bright indigo; fine bells and spike.
Charles Dickens, gray shaded with blue; large spike and bells, and so finely set as to be handsome.
Leonidas, clear blue. Fine.
Regulus, pale blue; fine waxy bells on a very fine spike.
Madame Coste, deep blue; only moderate-sized bells, but fine large spike.
Grand Lilius, azure blue, but rather pale. Very fine.
Lord Palmerston, much in the way of Argus, not yet let out.
Thorwaldsen, one of the best of forms, with the loveliest of marbled blue bells of immense size on a rather small spike.
Porcelaine Sceptre, porcelain blue, deeply shaded. Good.
Mimrod, light blue; nice spike; fine bells.

SINGLE WHITE.

Queen of the Netherlands; fine bells on an immense spike. A fine white.
Madame Van der Hoop, a very fine white; large bells and fine spike.
Snowball, fine in form and substance, of the purest white, with large bells and spike. One of the finest Hyacinths out.
Paix de l'Europe, charming white, so pure and decided; rather small bells, yet very closely arranged on an immense spike.
Fair Maid of Denmark, a splendid white; large bells and fine spike.
Alba Maxima, pure white; large bells, closely set on a large spike.
Victoria Regina, fine white, and fine every way.
Miss Burdett Coutts, creamy bluish; large bells of good substance, and immense spike. A most beautiful kind.
Gigantea, bluish; would be nice bells (though large enough now) if the petals were wider, instead of peculiarly narrow; fine spike.
Lady Franklin, bluish; large bells on peculiarly long footstalks, forming an immense spike. First-rate.
Grande Blanche Imperiale, bluish, with rose stripes; fine bells; good spike.
Seraphine, another bluish, with narrow petals, but a number of bells sufficient to form an immense spike.
Elfrida, beautiful creamy bluish; large well-shaped bells, closely set on a long spike.

SINGLE BLACK.

General Ravelock should be good, and it really is a magnificent purple changing to black, with fine closely-arranged bells, forming an immense spike. A fine Hyacinth, if not the finest in cultivation.
Prince Albert, fine bells, closely set on a nice spike.
La Nuit, deep purple black. Fine.
Von Humboldt, purplish black, with white eye.
Lampighter, purplish black, with a white eye.

SINGLE YELLOW.

Ida, a really good yellow. Fine.
San Francisco, deep yellow, charming.
Victor Hugo, fine bells and spike, but not worthy the name it bears.
Duc de Malakoff, straw, instead of yellow, with a stripe of lake on each segment. Very fine bells, neatly arranged on an immense spike.
Aurora, straw again; the tube splashed with pink, the segments with pink of a deeper hue in stripes; smallish bells, yet forming a nice spike.
Koning van Holland, creamy yellow, shaded with an orange all but red; moderate bells closely arranged on a fine spike.

All the Hyacinths named are first-class, and are as easy of management as commoner and next to worthless kinds. There are some, however, that are specially adapted for early forcing, as *L'Ami du Cœur* (single red), and a few others; but the majority of the single varieties may be had in bloom any time after Christmas by potting them sufficiently early, so that the pots become well filled with roots before they are brought into a house with any great heat. In my next article I shall proceed to the treatment of Hyacinths as regards soil, potting, &c.—G. ABBEY.

(To be continued.)

PACKING ORCHIDS FOR IMPORTATION.

"*ORCHIDOPHILUS*" will find all the information he requires by referring to page 8 of Mr. B. S. Williams's "*Orchid-Grower's Manual*," published by Chapman & Hall.

Mr. Williams says, "*Exides*, *Saccolabiums*, *Vandas*, *Angraecums*, and similar plants that have no fleshy bulbs to support, are best imported after they have become established on flat pieces of wood, so that they can be nailed to the sides of their travelling case." In his opinion "Orchids should be sent away from their native country during the dry season, which is when they are at rest."

He has received "plants in good condition from India in close boxes packed in dry soft shavings, while on the other hand," he has also "seen many spoiled in that way," which he attributes "to their not being packed in a proper state."

I should think charcoal dust would not answer, as in consequence of its having a heating tendency (?) it would be injurious to the plants, causing them to sweat and rot.

Once more, to quote from Mr. Williams's interesting Manual. "The best time of year for receiving Orchids in this country is, if possible, the spring, in order that they may have the summer before them to get established."—W. B. d'A., *West Moulsey*.

REMOVEABLE GREENHOUSE.

THE following is in answer to "HEREFORD," who wants a moveable greenhouse, span-roofed, 22 feet long, 14 feet wide, and asks questions accordingly.

Had it not been for the words "span-roofed greenhouse" we would have recommended Sir Joseph Paxton's houses for the million. For a house, however, of the usual shape—say the above length and width, and 6 feet high at the sides, and 11 feet at ridge, we would proceed as follows:—Obtain three pieces of oak $4\frac{1}{2}$ inches square, 14 feet long, and lay them across, one at each end, and one in the middle, on ground well firmed, and coated with tar. These will form the foundation, and keep the house from spreading. On the sides fix pieces of timber 4 inches square, and on these and the two end foundations fix studs, of the necessary height at the sides to reach the wall-plate, every $3\frac{1}{2}$ or $4\frac{1}{2}$ feet apart. Connect the two plates, by rafters, with a double ridge-board, 10 inches between them, and the skeleton of the house is finished. Screws well greased should be used instead of nails. Sashes to be fixed in the same way, front sashes also; and all sashes fixed. Sides and ends to be formed of wood and glass—wood say $2\frac{1}{2}$ to 3 feet high all round, of one-inch board, screwed to studs, and for safety two-inch thin pieces screwed along the joints. Ventilation should be given at the sides by shutters or wood flaps; at top by swinging-boards, between the double ridge-board, and rain prevented from entering by a cowl above with open sides. The three sleepers for the side sills to be below the ground level, inside; the centre table or stage to be made in separate pieces and moveable, from 5 to 6 feet wide; path all round to be from $2\frac{1}{2}$ to 3 feet wide, side shelf $1\frac{1}{2}$ foot wide all round, except at the doorway. The hot-water pipes should be beneath the shelf, or small stage, the shelf supported by brackets on upright studs in front, and small columns in line with the pathway. Heating may be effected by a small portable cylindrical boiler placed inside at the coldest end, and a small space shut off to prevent any dust getting to the plants on lighting the fire, clearing out ashes, &c. For common things a good iron stove would do all that was needful, but the boiler and pipes will be better. Nothing should be sunk in the ground, lest it raise a landlord's question.

VISITS TO GARDENS PUBLIC AND PRIVATE.

MESSRS. PAUL & SON'S, CHESHUNT.

LONG ere the Rose became, as it now is, everybody's flower—when Hybrid Perpetuals were unknown, and the floral world had not been taken by storm, as it has been, by generals, dukes, fair dames, princes of the blood, &c.—Rivers, Wood, Lane, and Paul were names ever associated with the Rose; and even now, when the number of growers for sale has been so largely added to, and rosarians abound, these names still retain an honoured position. One feels in going to them that there is all the difference between these and many of their competitors that there is between one of the venerable churches of our land and a spick and span new one built after the designs of Gilbert Scott. The one may not be quite in order, there are things that continually remind you of age; but despite of the trim neatness of the new, the faultlessness of its architecture, the brilliancy of its appearance, you rather like the old better. It was with somewhat of this feeling that I a week ago found myself on the way to fulfil an oft-repeated invitation to visit Mr. Paul at Cheshunt. Having a few hours to spare ere leaving for Colchester, I trusted myself to the tender mercies of the Great Eastern Railway, and reached my destination on one of the hottest days we have lately had. I did not, of course, expect to see much; the long-continued drought

had, I knew, prevented much second growth; and consequently the bloom of Roses, I knew, must be very defective, few in number, and, after what I had seen, hardly worth looking at: but there was really more than I could have expected.

The nurseries of Messrs. Paul & Son, which adjoin the pretty little village of Cheshunt, comprise about fifty acres, a large portion of which is allotted to the usual general stock of a nursery—fruit and forest trees, shrubs, &c., and about ten or twelve acres are devoted to Roses. The soil on which these are grown is of that rich unctuous loam which the Rose delights in, and which we in vain try to imitate, and to which mainly are to be attributed the magnificent blooms that have been exhibited by this eminent firm during the past season. It must be borne in mind, however, in comparing the stands of nurserymen with those of private growers, that the great advantage that the former have is in the possession of what are technically known as dormant buds. These are those buds which, having been inserted in the summer or autumn, have not started, but in the spring shoot out. They are allowed to throw up their terminal cluster of bloom, and both in size and brilliancy far exceed those which are cut from older plants.

The season is a very unfavourable one for autumn blooms; but I noticed amongst kinds freely in flower *Maréchal Vaillant*, a flower not nearly so well known as it ought to be; *Madame Caillat*, of which the same may be said—it is large, fine in shape, and good in colour; *Alfred de Rougemont*, one of the best of last year; *Lord Clyde*, there was a very fine piece of standard plants of this, and next to *Charles Lefebvre* it is, perhaps, the best dark crimson Rose we have—it is, like that noble flower, very strong in constitution and vigorous in habit, and the number of fine blooms at this time testified to its value as a perpetual-blooming Rose; *Baron Gonella*, a splendid Bourbon, rarely ever failing to give a fine bloom at all seasons; *Olivier Delhomme*, a beautiful bright flower; *Alphonse Damaizin*, excellent; *Vicomte Vigier*, very free-blooming, but at times somewhat thin; *Vainqueur de Goliath*, fine; *Madame Julie Daran*, either the plant I had of this was not correctly named or my soil does not suit it, for I have seen it so fine in so many places that I must withdraw my judgment against it and put it down as an *A1* Rose; *Lord Canning* was also well in flower, but Mr. Paul hesitates as to letting this out as a new Rose, for it is somewhat flimsy in the petal, and he has therefore decided on not propagating it further, but will put it into his catalogue, and it may possibly happen that it will be better in some localities and seasons than it has yet proved to be; *Lord Macaulay*, an excellent dark Rose; *Madame William Paul*, curious in its shading, and likely to be a useful Rose; *Lady Emily Peel*, small, but will be in request for its shape and colour; *Baron Adolphe Rothschild*, a bright and excellent flower, far before the other *Baron de Rothschild*.

We had a talk over the new Roses, some of which were in bloom, and our conclusions were very much of the same character—viz., that they were a very indifferent lot, while there were a few good flowers amongst them. The best of these were *Pierre Notting*, a well-built dark crimson flower, with a bright scarlet hue through it; *Claude Million*, crimson scarlet, which I also saw good in Paris; *Kate Hausburg*, a bright pink; *Madame Derreux Douville*, bright rose colour with lighter edge to the petals, another flower I saw very good in Paris with *Levêque* who sent it out; *Bernard Palissy*, bright reddish carmine; *Madame Victor Verdier*, cherry red, very deep and excellent; and *Bourbon Rev. H. Dombain*, very brilliant and good. These form the cream of the whole collection of last year; and it will be seen that there is a very large quantity of "skim milk" left. There must be an end to this; and if the English Rose-growers are resolute in the matter the inundation of rubbish will soon come to an end.

Besides the Roses in the open ground there is a very nice Rose-house, in which all the best varieties of *Teas* are planted out, and which must in the proper season be a most enchanting sight. The plants now looked very healthy, and gave promise of doing well next spring; nor have I ever seen a finer house of Vines in pots than there was here. The canes were all vigorous, well set with fruiting-buds, and as they were grown in a small span-roofed house, and

only one row on each side, every encouragement to their growth was given them, which they amply repaid by their vigour.

In the greenhouses there was not, of course, at this season much to see; but Mr. George Paul's treatment of that pretty autumn-flowering *Amaryllid*, *Vallota purpurea*, has been very successful. He showed me a quantity of bulbs which were last year very small, but which were now throwing up two and three stems of bloom, while small offsets of last year were now blooming strongly. This desirable result has been obtained by simply growing them well from the time of blooming. As soon as that is over the stems are cut down as low as possible, the bulbs are repotted, and then as they fill the pots with roots are again repotted, and kept growing all through the winter and spring. When they begin to show their flower-stems they are removed into the greenhouse, and contribute greatly to its gaiety. It ought certainly to be extensively grown for this purpose.

There is here, also, a very nice collection of *Hollyhocks*, for which the season seems to have been especially favourable, the blooms having been finely developed, although it has been necessary to mulch and water liberally. Amongst the most remarkable varieties I noticed *Jules Margottin* (a seedling of Messrs. Paul's), *Morning Star*, *Lady King*, *Stanstead Rival*, *Omega* (a fine seedling of Mr. Roake's, to be sent out by the Messrs. Paul), *Joshua Clarke*, *Lord Chiffenden* (Lane's), *Lady Dacres*, *Invincible*, *Beauty of Mitford*, and *Heperis* (this more curious than pretty). The soil seems here to suit the *Hollyhock* admirably, and a fine and noble-looking flower it is.

As I had to return to town early, so as to get down to Colchester in the evening, my visit was a hurried one; but I was much gratified with all that I saw, and have no doubt that the Cheshunt Nursery will maintain the high position it has held for so many years.—D., Deal.

THE ROYAL HORTICULTURAL SOCIETY'S AUTUMN SHOW.

This was announced to take place on the 7th, the same day as that selected for the Crystal Palace Show, and on the fact being discovered or pointed out the date was changed to the 6th; but the result was much as we predicted, for the display was meagre, and the attendance of visitors certainly less than a hundred.

For Roses there were three classes, and three exhibitors came forward—viz., Messrs. Paul & Son, Rev. W. F. Radclyffe, and Mr. Treen, of Rugby. The first-named had first-class certificates for twenty-four and eighteen. Mr. Radclyffe had a second-class certificate for twenty-four, and Mr. Treen first for twelve, and second for eighteen. We noticed good blooms for the season of the year of *Triomphe de Caen*, *Senateur Vaisse*, *Marechal Vaillant*, *Gloire de Dijon*, *Solfaterre*, *Jules Margottin*, and *Celine Forestier*, the best coming from Messrs. Paul.

Of *Hollyhocks* there were two classes; and in each the only competitors were Messrs. Minchin & Son, of Hook Norton, Oxfordshire, whose flowers were remarkably fine. The most noticeable were *Argentea*, *Royal White*, *Gem of Yellows*, *Pericles*, *Beauty of Mitford*, *Emmeline*, *Princess of Wales*, not large, but a pretty rosy pink; *Rev. Joshua Dix*, fine crimson, and of great substance; *Queen Victoria*, rosy carmine; *E. B. Ullett*, fine deep crimson; and *Invincible*, buff-tinted rose. *Stanstead Rival* was also large and fine. Messrs. Minchin well deserved the first-class certificates which were awarded them, both for their stand of twenty-four and twelve.

Of *Gladiolus*, Messrs. Paul & Son contributed a good box of twenty-four, among which *Brenchleyensis* well maintained its position for brilliancy of colour. Of the others the most showy were *M. Vinchon*, scarlet; *Stephenson*, crimson; *Victor Verdier*, fine bright scarlet; and *Mathilde de Landevoisin*, flesh, with a purplish streak in the throat. Mr. Treen also sent some excellent spikes, but unnamed.

Of *Verbenas*, Messrs. Minchin sent a very good stand, comprising *Foxhunter*, *Géant des Batailles*, *Grand Eastern*, *Princess of Wales*, pale blue, white eye, and *Mrs. Moore*, deep blue with distinct white eye.

The only exhibitor of Dahlias was Mr. Keynes, of Salisbury, who exhibited in all the nurserymen's classes, and his blooms, as usual, were excellent. In his stand of thirty-six were—White: Mrs. Piggott, and Miss Henshaw; Yellow: Queen of Primroses, Fanny Purchase, and Golden Drop; Orange and Buff: Hugh Miller, Willie Austin, Pauline, and Norfolk Hero; Crimson, Maroon, &c.: Donald Beaton, Andrew Dodds, Garibaldi, and King of Sweden. In other stands from the same exhibitor were fine blooms of Criterion, Lilac Queen, Charlotte Dorling, Anna Keynes, blush white, John Wyatt, rosy purple, besides others already named. The three stands of Fancies from Mr. Keynes, were also very good. In the Amateurs' classes there were no exhibitors.

Of other objects, Messrs. Paul & Son contributed Asters; Messrs. Smith, Dulwich, some fine Balsams; and Messrs. A. Henderson & Co., a collection of new plants, including three kinds of *Campylobotrys*, a large plant of *Cissus porphyrophyllus*, *Rhododendron javanicum* in flower, *Jacaranda ilicifolia*, which deserves to be more extensively grown on account of its graceful fern-like leaves, *Musa zebrina*, and some other ornamental-foliaged plants.

THE CRYSTAL PALACE AUTUMN SHOW.

SEPTEMBER 7TH AND 8TH.

For the extent of the display and the numerous attendance of the visitors who inspected it, this Show yielded to none of its predecessors held at the same season and place. Though necessarily less varied than a summer show, the display was equally extensive, and the quality of the productions was excellent. The objects exhibited occupied a double line of tabling running the entire available length of the nave, of which one half was devoted to flowers and the other to fruit.

The main features of the floral department were Dahlias, Hollyhocks, Gladiolus, and Asters, the entries of the former being extremely numerous, and there was scarcely a stand which was not highly creditable to the exhibitor. The size of the blooms, however, was, as a general rule, not equal to last year—a circumstance which is easily accounted for by the long drought which has prevailed all over the country, and in contending against which the growers must have in many instances had great difficulties.

DAHLIAS.—In the Nurserymen's Classes Mr. Turner, of Slough, and Mr. Keynes, of Salisbury, as usual, carried off the principal prizes with splendid blooms of the best varieties. The former was first in the class for forty-eight blooms with, among others, excellent examples of Mirfield Beauty, Golden Admiration, Emma, Chieftain, Willie Austin, Madge Wildfire, Charles Turner, fine colour, yellow tipped with crimson, Lady Popham, Andrew Dodds, Leah, a fine new yellow, and Princess of Prussia. Mr. Keynes was second, Mr. Walker, Thame, third, and Mr. Legge, Edmonton, fourth; the stands of all being good, and, it is almost unnecessary to add, that of Mr. Keynes being particularly so.

In the next class for twenty-four blooms, Mr. Keynes was first with a fine stand, in which we noticed Golden Drop, Criterion which is generally good, Andrew Dodds, Miss Henshaw, one of the best if not the best white, Charlotte Dorling, a very fine flower, Norfolk Hero, Pauline, Baron Taunton, Hugh Miller, &c. Mr. Turner here came in second with, among others, Chairman, Miss Henshaw, Cygnet, a beautiful white, Emma, Andrew Dodds, Imperial, Lord Derby, Lord Palmerston, &c. The other prizes in this class were awarded to Mr. Walker, Messrs. Kelway, Langport, Somerset, Mr. Morse, Epsom, and Messrs. Saltmarsh, Chelmsford, in the order in which they are named.

In the Amateurs' Class for twenty-four, Mr. C. J. Perry, Castle Bromwich, was first with a fine stand comprising many of the kinds already named; Mr. J. Sladden, Ash, second; Mr. T. Hobbs, Lower Easton, third. In the next class for twelve, Mr. Sladden was first, Mr. Charlton, Kibworth, second, and Mr. Hopkins, Brentford, third.

Among Fancies we observed excellent blooms of Queen Mab, Lady Parton, Pauline, Countess of Shelburne, Sam Bartlett, Baron Alderson, Madame Lemmens Sherrington, Norah Creina, &c. In the Nurserymen's Class Mr. Keynes was first, Mr. Turner second, Mr. Walker third; and in that

for Amateurs, Mr. Sladden, Ash, and Mr. C. J. Perry occupied similar positions.

A few seedlings were shown, the best being Spitfire, orange red, from Mr. Rawlings; Leah, yellow, from Mr. Turner; and Princess Alexandra, yellow and orange, with deep scarlet markings; to all of which first-class certificates were awarded.

ASTERS.—Of these there was a good show, both quilled and tasselled. Mr. Sandford, gardener to T. Thomasset, Esq., was first in both classes; and the second prizes were taken by Mr. Betteridge for quilled, and Mr. Ward for tasselled.

ROSES.—The season was too far advanced to expect much from these, nevertheless, some good blooms were shown, the best being Gloire de Dijon, Louise de Savoie, Celine Forestier, Victor Verdier, and Gloire de Santenay. Mr. Turner, Messrs. Paul & Son, and Mr. Exell were first for 36, 24, and 18 respectively.

HOLLYHOCKS though not exhibited in such numbers as might have been expected, were shown in excellent condition. The most noticeable varieties were, Rev. Joshua Dix, a beautiful crimson, of fine form and substance; Stanstead Rival; Mrs. F. Mackenzie; Mrs. B. Cochrane; Lord Loughborough; Empress Eugénie, a beautiful white; Lilac Perfection; Invincible; and Prince Charlie, very fine colour. In the class for 24, Mr. May, Bedale, was first; Rev. E. Hawke, Willingham Rectory, well known as a successful cultivator and improver of this flower, second; and Messrs. Minchin & Son, third. For 12, Mr. Small, Norwood, was first; and the Rev. E. Hawke, second.

VERBENAS.—The best stands of these came from Mr. Perry, of Castle Bromwich, who took both first and second prizes; and from Mr. Turner. The pips were fine, and the varieties included such acquisitions as Lord Leigh, Foxhunter, Grand Duchess, Mauve Queen, &c. Mr. Perry likewise contributed his seedling Snowball, which fully justified the high character given of it at page 68, and Charles Turner, blush white with rosy purple eye, both of which deserved and received first-class certificates.

GLADIOLUS.—The splendid collection of Mr. Standish, of Ascot, was one of the most attractive features in the Show; and in the size of the spikes, the brilliancy of the colours and number of the varieties exhibited was unequalled. One variety, Eleanor Norman, with a large flower, white and delicate pink, attracted much attention on account of its beautiful colours; Dr. Hogg, deep scarlet with a violet tinge in the throat; Aurelian, The Ensign, The Colonel, Rembrandt, Stephenson, Calypso, and others, were also fine. Messrs. Kelway & Son took the second prize, and in the class for 24 spikes, first; Mr. Standish being placed second. There is one point which deserves remark, it is, that Messrs. Kelway's spikes were supported by Yucca leaves at the back, a mode of showing which should be discouraged as being unnatural, and not exhibiting the foliage.

MISCELLANEOUS.—Messrs. Veitch contributed a collection of new and rare plants, including the curious scarlet-spined Anthurium Schertzerianum, and a good collection of Asters in pots; Mr. Linden sent *Eugenia grisea* and other plants lately exhibited at South Kensington; Messrs. F. and A. Smith, Balsams; Mr. J. Fraser, Heliotrope Surpassé Guascoi, a vigorous-growing kind with large trusses of flowers; Messrs. Downie, Laird, & Laing, *Amaryllis reticulata* superba with very pretty rosy pink markings; also, new Pentstemons, already reported on, and spikes of seedling Hollyhocks, of which Reine d'Or, yellow; The Queen, blush white; and Monarch, crimson, were very promising. Indian Yellow and some others of Mr. Beaton's new Geraniums were shown by Mr. W. Paul.

FRUIT.

The best collection came from Mr. Henderson, of Trentham, and comprised a fine Cashmere Melon, Trebbiano and Black Hamburgh Grapes, Peaches, Nectarines, Apricots, and Plums. The second best was from Mr. Dawson, and consisted of a Pine, Barbarossa and Muscat Grapes, Morello Cherries, Washington Plums, Peaches, Nectarines, and Pears.

Fine Apples were very sparingly shown, some were not in good condition, and two or three had lost their crown. The first and second prizes for Queens were withheld, and Mr.

Stafford had the third. The best fruit of any other variety was a Providence of 10 lbs. Mr. C. Smith, Norwood, took the second and third prizes in the same class. Mr. Drewett, Denbies, exhibited a curiosity, being a hen-and-chickens Pine from Penang, having a double crown and seven small Pines coming from the base, the whole weighing 4 lbs. 2 ozs.

GRAPES, though not shown in such abundance as we expected, were in some instances in great perfection. Mr. Meredith, as usual, taking the lead. In the class for boxes of not less than 12 lbs. weight he was first with large and beautifully-coloured Black Hamburgs; Mr. A. Henderson and Mr. Wills, Oulton Park, being second with Lady Downe's in fine condition; and he was again first in the class for the best three bunches of Black, his Black Hamburgs being of the extraordinary weight of 11 lbs. 4 ozs., the bunches remarkably compact and dense, and the berries finely coloured. Mr. Ford was second, and Mr. Omant third with good bunches of the same kind.

In White Grapes Mr. Dwerrihouse was first with splendid bunches of a seedling variety, the berries of which had an amber tinge, and the largest bunch must have been a foot long and 8 inches across at the shoulders. Mr. Budd, Cobham Hall, was second with well-coloured Muscats; and Mr. Wills third with Trebbiano.

For the largest bunch of any kind, Mr. Meredith was again first with Child of Hale, noticed some time ago in our Fruit Committee Reports. This was a magnificent bunch of 8½ lbs. Mr. Dwerrihouse was second with his seedling weighing nearly 5 lbs., and Messrs. Lane & Son third with Muscat Hamburg 2 lbs. 3 ozs. Marchioness of Hastings from Mr. Henderson weighed 4 lbs. 14 ozs., but was not ripe.

PEACHES AND NECTARINES were not generally large, a result of the season. Of the former, the principal varieties were Barrington, Royal George, Noblesse, Grosse Mignonne, and Violette Hâtive. Mr. Cross, Alresford, was first with Barrington, very fine; and second with Royal George; Mr. Spivey third with Monstrueuse de Doué.

Of Nectarines, the kinds shown were Elruge, Violette Hâtive, Pitmaston Orange, and Red Roman. Mr. J. Fraser, Lea Bridge, took the first prize with Murrey; Mr. Henderson second with Violette Hâtive; and Mr. Woodward third with Pitmaston Orange.

MELONS were extensively shown, and many of them were very fine as regards size and appearance. Scarlet Gem was almost the only kind shown in the Scarlet-fleshed class; and in the Green-fleshed, Golden Perfection, Golden Drop, Trentham Hybrid, and Hybrid Cashmere were the principal. Mr. Young, Havant, was first; Mr. Blair second, and Mr. Godfrey third, all with Scarlet Gem; and in the other class, Mr. Bailey, Shardeloes, was first with Bailey's Gem; and Mr. Rust second with Bromham Hall.

CHERRIES are now generally over, but several good dishes of Morello were shown. Mr. Dawson, Panshanger, was first with that kind and Belle Magnifique; Mr. Holder, Reading, second with Morello and Flemish, very good; and Mr. Bailey third with Morello and Bigarreau.

PLUMS were both numerous and fine. Coe's Golden Drop, Washington, Jefferson, Magnum Bonums, Goliath, Kirke's, and Denyer's Victoria were shown in excellent condition. The first prize was awarded to Mr. Bailey for Jefferson and Washington, beautifully coloured; and Prince of Wales, which is generally considered a second-rate fruit. Mr. Woodward was second with Nectarine, Jefferson, and Denyer's Victoria; Mr. Kaile third with the first two and Washington.

APPLES, both for dessert and kitchen use, occupied a great extent of tabling, but though mostly well grown were not remarkable for their size. Of the former, King of the Pippins, Kerry Pippin, Ribston Pippin, Blenheim Pippin, Cornish Gilliflower, Red Astrachan, and Devonshire Quarrenden (both finely coloured), Cox's Orange Pippin, Cellini, and Fearn's Pippin were the principal kinds. Messrs. Lane, St. Mary's Cray, took the first prize with Colonel Vaughan, Red Astrachan (beautifully coloured), Kerry Pippin, Cellini, Fearn's Pippin, and Maynard's Bearer. Dr. Cooper was second; Mr. Webb, Reading, third. In kitchen Apples, Hawthornden, Alexander, Keswick Codlin, Catshead, Blenheim Pippin, Golden Noble, Kentish Fillbasket, Lord Suffolk, and New Hawthornden were numerous shown. The

first prize in this class also was taken by Messrs. Lane, St. Mary's Cray, with Alexander, Blenheim Pippin, Keswick and French Codlins, Catshead, and Summer Tambour, all of which were fine. Mr. Mortimore, gardener to A. Smee, Esq., Carshalton, was second; Mr. Wren third.

PEARS were likewise very numerous, but did not present anything very remarkable. As might be expected Williams's Bon Chrétien, Louise Bonne of Jersey, Duchesse d'Angoulême, and Beurré d'Amanlis were the predominant sorts. The first prize for three dishes was awarded to Mr. J. Wilson, gardener to Sir R. Howard, Fulham; the second to Mr. Fraser, Lea Bridge; the third to Mr. Nicholls, Hammer-smith. The heaviest single dish was shown by Mr. Dwerrihouse, the kind being Grosse Calebasse, which we have seen much larger. Uvedale's St. Germain, from Mr. Goldsmith, weighing 10½ lbs., was second; Catillac, 7½ lbs., from the same, third. The best dish for flavour was Louise Bonne, grown in an orchard-house by G. Wilson, Esq., Weybridge; Williams's, from Mr. Heather, Ember Grove, being second.

MISCELLANEOUS.—Excellent pot Vines came from Messrs. Lane & Sons, Berkhamstead; Mr. Giers; and Mr. W. Paul, the latter being exhibited to show the comparative time required for ripening the different varieties, all being placed under glass at the same time, the middle of April. Peaches, Apples, and Pears in pots were sent by Mr. Fraser; Figs, Cherries, &c., by Messrs. Lane; the fruit of *Passiflora edulis* by Mr. Scorer; Granadillas by Mr. Blair; large and fine Oranges by Mr. Hutcheson; good Red and White Currants by Mr. Milton; Apricots by Mr. Henderson; Cob Nuts and Filberts by Mr. Webb, Reading; and Capeicums, 3½ inches long by 2½ to 3 in diameter, by Mr. Scorer. Lastly, a beautiful wax-like dessert Apple, varying in colour from rose to carmine, came from Mr. Taylor, Nursling, Southampton.

EARTHING-UP CELERY.

ABOUT half a score of correspondents have written wishing for a short account of the reasons why we disapprove of the general directions in standard works, "Keep putting a little earth to the Celery in dry weather." In other words, why we disapprove of this frequent bit-by-bit earthing-up. Our reason, which applies to early Celery chiefly, is simply this, that the bit-by-bit system of earthing-up is just the best means for securing what we do not want, bolted Celery—that is, plants running and throwing up their flower-stalks, when they are deemed unsuitable for sending to table.

The Celery is naturally a ditch or swamp plant, and as such rejoices in moisture. Few plants in a kitchen garden need an equal supply of moisture. When it can be had, a short time before earthing-up, therefore, most people give a good watering. Some days afterwards, and when dry overhead and the leaves are dry, they give the plants 3 or 4 inches of earthing-up; in a week or ten days a little more, and at another interval a little more. If a good rain does come, it will not penetrate more than an inch, if it does for a quarter of that depth. Provided the weather is sunny the large leaves soon exhaust the moisture given at the roots before earthing-up. They can get no more unless what falls in the shape of dew or rains, which merely affect the foliage, not the roots. Hot sunny days continuing, the leaves throw off moisture by evaporation as long as they receive a supply; and at last, when from the demands made upon them the roots are pretty well as dry as if they were in a fresh ash-heap, the plants in self-defence and for the purpose of perpetuating the race, throw up their flower-stalk as a reproach to us for want of thought and consideration. We thus treat the Celery as we would any other plant we wish not to grow fast, but to flower and seed quickly—namely, we curtail the root-action, and deprive the roots of the moisture necessary for vigorous growth. We could hardly adopt a better plan than we do with the Celery if we wished a Cabbage, a Cauliflower, or a Turnip to bloom prematurely, instead of to grow vigorously, only the Celery is naturally more sensitive to dryness.

On the other hand, suppose the Celery plants are growing to a nice size, we go over them, pick out all suckers, and remove all bad leaves, and then after watering, and the plants have got over this doctoring, we tie each plant with

a band of matting—say 6 or 8 inches from the soil, not firmly, but sufficiently so to cause the leaves to stand upright round the heart of the plant, and so firm as by the very tying to commence the process of blanching. Then, if necessary, we water again. If it is dry weather, and we do not want to earth-up, we may scatter from half an inch to an inch of soil over the bed or rows, to keep the moisture in, and this may be repeated if necessary. For our first Celery we earth-up after such watering from twenty to twenty-five days before we want to take it up, doing the most of this earthing-up at once, and earthing only a little at a time for early use, as if too much is done the roots would be too dry in sunny weather from the evaporation from the leaves. As autumn goes on, when, after the middle of October, it matters less how the earthing-up is performed, as done it must be early, to secure the Celery against frost, by some means or other. But then evaporation is reduced to a minimum—nay, the leaves by the end of that month will absorb as much as they perspire, and, therefore, there will be no danger of the roots being kiln-dried. We could say little more were we to write a volume on the subject.—R. FISH.

A GOOD EXAMPLE.

[We have not space to spare for reports of what occurs at the very numerous village horticultural societies of our land; but we must publish a portion of the sayings and doings on the 27th of August, in a remote parish of Ireland. If similar associations, fostering the love of home, the beautiful, and the useful, were established throughout that land of vast capabilities, it would be a powerful agent for its improvement, and the "shillelagh" would more generally become a hoe-handle, and benefit by breaking clods oftener than heads.]

THE KILSKEERY GARDENING SOCIETY.

In the parish of Kilskeery the want of a society which would act as a stimulus to the people in the cultivation of gardening has long been felt, and it was to supply the deficiency that a society has been formed in the parish, which would incite its farmers and cottagers to pay greater attention, than they have hitherto done to the cultivation of their gardens. Having that in view a Horticultural Society has been established in the parish, under the patronage of the estimable Rector, the Rev. John Grey Porter, and Mrs. Porter, who gave every encouragement to the project, and the first exhibition of the season was held in the petty sessions court, Trillick. The show of flowers and vegetables was considerable in amount, and taking into account that they came from the gardens of the small farmers and the cottagers in the parish, they reflected the greatest credit on their producers. The show altogether was excellent, and gave evidence of a promising future for the Society.

The Rev. Mr. Porter, at the request of the Committee, presided.

The Secretary, Mr. Fitzsimons, read the list of prizes, and the Rev. Chairman rose and said, that by the favour of the Committee he had been called on to preside upon that occasion; and as that was the first show of their Society, he thought it his duty to mention a few things to them connected with its establishment. They were all aware the parish was inhabited by a most industrious, decent, orderly, and intelligent community, that they had neither grand jurors among them nor resident landlords, nor had they anything to look to but their own resources; and deprived as they were of all the advantages which the neighbouring parishes possessed, for there was scarcely a gentleman resident among them who kept a gardener for the purpose of encouraging horticulture, he (Chairman) felt proud at what he saw exhibited that day (applause). He had had an opportunity of going round the room and examining the entire exhibition, but the majority of those he had the honour of addressing had not time to do so, and he hoped they would all examine the whole display, and above all look at the beautiful flowers that were placed all round them. There was a horticultural society in the county Fermanagh, which lately held a show of flowers. He was not present at it, but on reading in the newspaper the list of prizes, he found that they generally went to my Lord Ernie, my Lord Enniskillen,

and a gentleman who resides in the Palace at Clogher, of the name of J. Ellison Macartney (a laugh). What good did the granting to those gentlemen—who might have the fruits of their gardens placed on their tables—of prizes do the honest fellows whom he felt proud to be addressing on the present occasion? He wanted to have the tastes of the peasantry improved, he wanted to have their minds elevated and enlarged, in order that they should fully appreciate and enjoy all that was beautiful in nature. Let the grandees settle their affairs amongst themselves, but he hoped that with the people's help—and he could do nothing without them—and the help of the ladies, to have annually in the room they were assembled in, such a meeting as he had the pride and pleasure of presiding over on that day (cheers). Flowers were said to be the toys of the rich; but they were also, as he conceived, the friends of the poor. It was impossible for any person to cultivate a flower and not look up with thankfulness and joy to God who had made that flower (hear). He had been reading the other day a little book written by Dr. Mayhew, that on one occasion a missionary went to a district called Bloomsbury, in the neighbourhood of the Seven Dials, in London, where he visited a poor old woman who was living on the parish allowance of 2s. 6d. a-week, and she felt delighted at seeing the missionary come to visit her at her bedside. He went to the window and saw on the sill a broken teapot, and in that was a Strawberry plant. The missionary rejoiced at seeing the plant growing in the broken teapot, and by way of comforting her he remarked to her that it was thriving well and that she would have some fruit. "Oh!" said she, "it is not for the sake of the fruit I cultivated it, but unable as I am to support a living thing near me"—for she had not even a cat or dog in the room with her—"I would like to have some living thing, for that living thing draws its life from the Creator, and I think when I have God near me who made this living plant I am safe."

He had never yet discovered among the annals of crime, through all his experience as a magistrate, the man who was fond of flowers being convicted of a crime. They had different kinds of flowers—they had the Orange which many liked, and which was a beautiful flower, and for his (Chairman's) part, he liked the "shillelagh" with its "Shamrock so green" (cheers and laughter). But upon that neutral ground they all could assemble together. He would have his flower, but there was no hostile feeling intended; and each and every one should have the flower he liked best. It was a good character for a man when he was fond of cultivating his flowers, for it showed that he had a taste for, and was fond of them. He should tell them that in all parts of the world, and especially in Ireland, there were societies of every kind. There were farming societies, racing societies, they had boat societies, and while mentioning that he wished them all on board the "Devenish" some time or other (laughter). There were societies for breeding dogs, for cats, and for donkeys (more laughter), and for everything that could be mentioned; and why should they not endeavour to raise the poor man; add more to his means of comfort, of intelligence and knowledge? If that were done they might depend on it that they would be humanising the lower classes of society more than they have been, and instead of men wasting their time after great evils, they would all cherish flowers because they were cultivated by them, for God had blessed the land with them. The world at first was a garden, for God had put man, after he had created him, into a garden, and told him to keep it; and after man's fall God desired him to go and till the earth, after he had driven him out of the garden he had forfeited by his sin. All who cultivated the ground, who propagated flowers, and made them the ornament of their dwellings, deserved the highest praise, and were worthy of every encouragement. He would call upon all those resident in the parish to support the Society. If they did so they would soon find that whatever influence he possessed he would be delighted to afford them. He looked upon it as one of the most agreeable duties of the clergyman, not only to preach, not only to have religious worship in God's house, but to do everything that would tend to civilise and elevate mankind. To the poor man in his cabin go, and tell him that God never intended him to live in cheerless misery. Let him have his garden to cultivate his flowers, and he would soon become a

happy man. Flowers required a great amount of industry in their cultivation, but without industry and contentment, it was impossible the country could be what it ought to be. Let a man have a large or a small garden, if he cultivated it, it proved that he was a neat person; and he who had a nice garden would be sure not to allow the Dockleaf or the Ragweed to flourish in it. He liked the man who cultivated his garden, and he only hoped that that show was the beginning of a brighter era to many of those who knew not the pleasure enjoyed in the cultivation of flowers, but who would yet have a neat garden to exhibit as the result of their taste, their labour, and their industry. It would afford contentment and pleasure, for it would place all on the road to reach that happy goal.

The choir of Kilskeery church, led by Miss Porter, sang the anthem, "Thine O Lord is the greatness," with sweetness and effect. Next followed an exquisite chorus, "The Apple Tree," which was most creditably performed, and then "God save the Queen."

A vote of thanks to the Ladies' Committee, and another to Mr. Fitzsimons for his exertions, were next severally proposed and carried with acclamation, and the proceedings terminated.

In the evening refreshments were partaken of by the exhibitors and the choir in the school-room, which was tastefully decorated for the occasion, after which the prizes awarded at the show were distributed to the successful competitors.

BATTERSEA PARK.

GARDENERS residing in distant parts of the country who only visit London once every three or four years, must be struck with the altered condition of the public parks, more especially if their visit should be in the gay period of the flowering season; but even in mid-winter they will perceive beds of evergreen shrubs embellishing plots which formerly deciduous trees or bushes failed to render cheerful before spring. Certainly the difficulty in obtaining a good display in the more central squares, and those portions of the parks which border densely-crowded localities, is such as will prevent their competing with more favoured spots; but the perseverance, skill, and management displayed in ministering to the taste of the public for flowers is worthy of all praise; and that those for whom such things are prepared duly appreciate them may be learned from the fact that though so many thousands daily throng those places of health and instruction, comparatively little damage is done to the plants, or other objects they so freely enjoy.

Of the open spaces devoted to public use, amusement, and recreation, around the great metropolis, undoubtedly the most useful are those situated in the most central positions. Unfortunately such positions are not the best adapted for vegetation: hence the difficulty in keeping them ornamental. The suburbs, however, afford a greater display. I must confess being agreeably surprised on a recent visit to the Victoria and Battersea Parks to find flower gardening so well and so extensively carried out. I mention both as being at opposite sides of London, the former exhibiting in the formation of its grounds an amount of taste which was rarely apparent in the early works of the kind in this country; while the latter, from the persevering efforts made to bring novelties before the thinking public, is also worthy of the highest praise, and a visit to Battersea Park will well repay the gardener who lives within a convenient distance of London.

Battersea Park, as it is called, occupies a large extent of flat, level land, lying on the south side of the Thames, the river forming its northern boundary; and to accommodate that numerous class of travellers who avail themselves of water transit, there is a landing-stage communicating with the garden, by which hundreds of visitors pass in from the steamboats every day. The natural flatness is in a great measure broken where necessary, by the various belts and clumps being, in most places, judiciously planted on mounds or knolls evidently of artificial formation, but approximating more closely to nature than is often the case elsewhere. The ground is divided into compartments by drives or public thoroughfares for vehicles, the sides at such places being

fenced in by suitable iron railing. Other walks cross the ground in different directions to which carriages are not admitted; and yet with all these sub-divisions, and the broad and irregular belts of shrubs and trees which in many places take off a wide margin from them, there are, nevertheless, several plots of unbroken ground of apparently six or eight acres each, appropriated as cricket ground; and excepting that at the time I saw it, the turf was, like that of every other place, suffering from the dry weather, it would be difficult to suggest a more suitable spot, while the rising boundaries of shrubs and trees gave the snug, rural appearance of a country district. I may add that the belts which generally fringe the drives are not formal and regular, but broken and diversified in many ways, as is likewise the ground, a bend inwards of the mass of shrubbery in one place being followed in another by a complete break through, so that the traveller on the public thoroughfare may be able to obtain a peep of the interior. Now and then beds of flowers are introduced with good effect, the wavy outline of the ground rising into a gentle swell, its summit crowned with plants suitable to the place; in other parts a piece of water is fringed with plants suitable to the position, while ever and anon the gay colours of the bedding plants present themselves in the distance, inviting a more close acquaintance. Often unexpectedly the visitor comes upon beds of plants not usually met with, as *Cannas*, *Hedychiums*, and plants remarkable for their foliage.

A semicircular plot of considerable extent near the centre of the north side was divided into a number of beds that were most tastefully filled with bedding plants of the most showy kinds, and all well grown. A series of wedge-shaped beds forming a sort of fan, having a circle from which each bed radiated was most beautifully arranged; perhaps the most telling bed being *Coleus Verschaffelti* and *Centaurea candidissima*, the latter forming the margin, and one or two (I forget which), broad lines of it running down the middle, the *Coleus* being in the intermediate space. Both plants were as richly coloured as could be desired by the most ardent admirer of good cultivation. The other beds were also good, being filled with *Geraniums*, *Lobelias*, *Verbenas*, and the various classes of plants usually met with in such places; but what surprised most visitors who thought themselves entitled to give a good opinion on such matters, was the great number of plants which elsewhere have the character of being scarce and costly. I fully believe I am speaking within the mark, when I say that fully a thousand plants of *Geranium Mrs. Pollock* were planted out, and many others equally rare elsewhere seemed to be in abundance here. The episodal flower gardens to be met with at the various points, all differing in character from each other, had each their separate charms, and as regards good arrangement, good keeping, and general efficiency, were all alike good. A rosarium was formed at what I believe to be the south-eastern side of the Park, the beds of *Roses* being embellished, as is usual at this season, with *China Asters* and similar plants, and from the appearance of the permanent occupants, had evidently been gay at an earlier period of the season.

We now come to what is by far the most important feature of the place, in fact one which astonishes the most practical and enterprising amongst us, for there are objects (apparently by our previous acquaintance with them), fresh from the tropics, or from some climate corresponding thereto. The sub-tropical garden as it is called, forms a compartment near the south side of the Park. A sort of broken ridge, from 4 to 10 feet high, forms the outer boundary of a plot which may be termed nearly circular. This outer ridge is agreeably broken by side spurs giving it a pleasing and natural appearance; and these elevations, being planted with shrubs and trees of a thriving kind, form an excellent shelter to the inside, which is still further sheltered from cold winds, or it may be parching sun, by eminences of a like character within the outer barrier.

These internal mounds or eminences being also clothed with suitable trees and shrubs, and so arranged as to form some well-sheltered vallies or corners, the place is admirably adapted for the purpose to which it is put—that of growing some of the many stove plants we have so long regarded as impossible to keep out of doors. All these vallies have the shelter of the higher ground and surrounding

vegetation, the plots being at the same time sufficiently high to insure good drainage, and the many plants turned out upon them are essential features. Plants requiring shade had their allotted place; probably a Weeping Willow hung over a tropical Fern, or a Beech might do the same kind turn to a Palm, for even this section of the vegetable kingdom had its representatives at Battersea; while in the more open spaces beds of plants remarkable for the singularity of their foliage might be seen at some distance from the general path, care being taken to introduce them so that the best general effect might be produced. Unfortunately my visit was a hurried one, and I had not time to notice more than a very few of the objects to be seen; but I may observe that as well as beds of the different plants grouped together, there were many single plants turned out on the turf, which so far as their appearance was concerned might have been there for years.

Entering the enclosure on the north side, the first plant I met with was a stranger to me, *Griselinia macrophylla*, a plant of which the appearance and growth resemble *Ficus elastica*, and widely different from *G. littoralis*, a densely-foliaged evergreen shrub not half so much grown as it ought to be, and which with me is as hardy as the common Laurel. Farther on a handsome tree Fern spreads its umbrageous fronds underneath a tree more common to the climate; but apart from such shelter might be seen a bed of *Dracena terminalis* luxuriating in all the richness of colouring which makes it so great a favourite with the visitors of our hot-houses. In like manner plants of *Brugmansia* stood out as sentinels here and there on the turf, with now and then a *Ficus elastica* of goodly proportions in the same position; in one or two cases a bed of the latter formed an interesting feature, but not more so than beds of the *Croton picta*, yet the latter, or, rather, a newer and improved species of this fine old favourite, was to be met with by the score planted out, and, to all appearances, enjoying the climate of Battersea instead of Batavia. There was no scorching, blistering, or withering; all seemed in perfect health and condition. In another place fine plants of *Marrubium zebra* spread their finely-formed leaves over plain English turf, or a few would be grouped together to form a bed; while further in the distance would be seen the commanding foliage of the various *Cannas*, some being of an almost bronze hue, while others were of a delicate green. *Hedychium* also formed other groups of a somewhat similar kind; while *Wigandia* and *Palma Christi* waved their noble foliage in luxuriant profusion in the distance, not but that a nearer acquaintance would be now and then made by a specimen advanced towards the low iron fence, which very properly shut out the throngs of visitors who occupy the walks. There are also some species of *Arundo* not commonly met with.

As respects Ornamental Grasses, there was a most beautiful white-edged kind, forming an edging to a small bed. An older species adjoining it (*Dactylis glomerata*), resembles it much in habit, but is much less white in colouring. *Stipa pennata*, or another *Stipa* of similar growth, is also brought into effective use; while ever and anon the eye would fall on a mass of *Centaurea candidissima* in quantity sufficient to make many of us envy the store from which it came. Even a *Centaurea* more rare than this (*C. argentea*), was to be met with in hundreds, and though it is less really white than the other one, its finely-cut leaves give it a rich appearance. A kidney-shaped bed of *Coleus Verschaffelti* edged with *Centaurea argentea*, had as rich an appearance as could well be conceived; though not more so than a circular bed of the same plant with an edging of *Centaurea candidissima*. Many other plants not at all plentiful even in hot-houses were here planted out by the score; but I do not recollect seeing any *Begonias* in a flourishing condition; I might, however, have overlooked them. *Caladiums* there were, and Ferns of various stove kinds, including *Gymnogramma chrysophylla*, and sundry others, which, in my hurried visit and the expectation of repeating it, I did not notice. When such veterans in plant-growing as Mr. Veitch, of the Exotic Nursery, Chelsea, express themselves astonished at the many valuable plants met with out of doors, I may with confidence strongly advise every gardener visiting London to go and see for himself; and if the same plants met his eye as occupied the sub-tropical garden in the middle of

August, he cannot be otherwise than astonished, and return pondering on what he has seen, and the field for enterprise which has been opened up.—J. ROSSON.

PORTRAITS OF PLANTS, FLOWERS, AND FRUITS.

UROCOLINA PENDULA (Drooping Urocolina). *Nat. ord.*, *Amaryllidaceae*. *Linna.*, *Hexandria Monogynia*.—Imported by Messrs. Veitch, of King's Road, Chelsea, through their collector Mr. Pearce. Native of woods on the Andes at Potosi. Flowers yellow, green-tipped, and white-edged, urn-shaped, drooping, in an umbel; each on a green tube so narrow as to resemble a pedicel. Bloomed in June.—(*Botanical Mag.*, t. 5464.)

MACLEANIA FULGIDA (Showy Macleania). *Nat. ord.*, *Vacciniaceae*. *Linna.*, *Decandria Monogynia*.—A handsome glabrous shrub. Native of New Grenada. Flowers scarlet, with yellow limb.—(*Ibid.*, t. 5465.)

CYPRIPEDIUM CARICINUM (Sedge-like Lady's Slipper). *Nat. ord.*, *Orchidaceae*. *Linna.*, *Gynandria Diandria*.—Native of Peru. Introduced by Messrs. Veitch through their collector Mr. Pearce. Requires a stove; blooms in May. Flowers pale green, white-margined, tipped partially with purplish brown.—(*Ibid.*, t. 5466.)

ERANTHEMUM COOPERI (Sir Daniel Cooper's *Eranthemum*). *Nat. ord.*, *Acanthaceae*. *Linna.*, *Diandria Monogynia*.—Raised by Messrs. Veitch from seed received by Sir D. Cooper from New Caledonia. Bloomed in a warm greenhouse during June. Flowers white, with middle one of the lower limbs dotted in purple lines.—(*Ibid.*, t. 5467.)

GENETHYLLIS FIMBRIATA (Thyme-leaved *Genethyllis*). *Nat. ord.*, *Myrtaceae*. *Linna.*, *Loosandria Monogynia*.—Native of south-west Australia. Introduced to our greenhouses by Messrs. Veitch. A lovely shrub; but its crimson involucre scales are its ornaments, the flowers within them being small and insignificant.—(*Ibid.*, t. 5468.)

PELAGONIUM.—*United Italy*. Exhibited by Messrs. Henderson & Son, Wellington Road Nursery. It is one of the tricoloured-leaved varieties. Margin of leaves creamy white; next a broad zone of crimson pink; next a bronzy dark shade; and centre green. Flower small, scarlet. It is a good dwarf pot plant.—(*Floral Mag.*, pl. 209.)

TEA ROSE.—*Alba rosea*. Creamy white; inner petals rosy tinged.—(*Ibid.*, pl. 210.)

FANCY PANSIES.—*John McNab*, ground pale sulphur; broad border of plum, margined with white. *Mrs. Dombain*, pale yellow; eye very large, and spot of deep purple, radiated; centre deep orange. *Mrs. E. Dean*, pure white, with eye and spot violet purple, shading to a paler hue. *Mrs. Scott*, cream-coloured ground; violet purple margin, shading paler inwards; eye and spot of same colour; centre deep orange. All sent out by Messrs. Downie & Co.—(*Ibid.*, pl. 211.)

PYRETHRUMS.—*Annie Holborn*, very double, white; centre delicate lilac. *Fulgens plenissima*, large, dark crimson. *Nemesis*, large, rosy red; centre lighter.—(*Ibid.*, pl. 212.)

CLEMATIS JACKMANNI.—This very beautiful hardy climber "originated at the Woking nursery of Messrs. G. Jackman and Son, and is, we believe, due to a happy idea which crossed the mind of Mr. G. Jackman, jun., which was to the effect that some of the blood of *C. lanuginosa*, thrown into the large-flowered hardy species and varieties of this genus, would result in the production of something good. The result has fully justified Mr. Jackman's anticipations; for the seed thus obtained has yielded a large batch of magnificent seedlings, with flowers of all shades of purple, varying towards lilac on the one hand, and a reddish plum or maroon colour on the other. One of the most marked of the whole series, so far as they have yet been proved, is *C. Jackmanni*.

"The mother parent of this batch of seedlings was *C. lanuginosa*. This was crossed with *C. viticella Hendersoni* and *C. viticella atro-rubens*, from which latter, no doubt, has been derived a rich reddish plum tint, which is found in many of the seedlings, and of which *C. rubro-vioacea* is a beautiful example, scarcely, if at all, inferior to, and perfectly distinct from, *C. Jackmanni*. The seedlings flowered for the first time in 1862, and both the varieties we have mentioned, selected from amongst them, were shown in August, 1863, at a meeting of the Floral Committee, and

were both awarded first-class certificates. The seedlings are all remarkable for a lustrous richness of colour, which greatly enhances their beauty.

"C. Jackmanni has ovate leaflets of moderate size, and slightly hairy. The flowers, which open flat, are 4 or sometimes 5 inches across, and have a variable number of from four to six sepals, of a roundish-obovate form, terminating in a little point, downy behind, and on the face of an intense violet purple, the colour being remarkable for its rich velvet-like appearance. The back of the sepals is marked by three ribs, which show like three slight furrows in front, the rest of the surface being veiny and somewhat rugose.

"C. rubro-violacea, to which allusion has been made, has the flowers of a rich reddish-tinted violet, and, when fresh opened, is almost maroon-coloured, and very remarkable for its velvety surface.

"Being perfectly hardy, of free habit, and flowering abundantly during the summer months, these new hybrid Clematises of the Jackmans are well worth a place wherever hardy-flowering climbers are cared for. We believe the two sorts to which we have alluded are to be sent out during the present autumn."—(*Florist and Pomologist*, iii., p. 193.)

HEDGE TRIMMER.



A VERY slight alteration makes a great improvement in many of our garden implements, and the above is an example. The hedge trimmer is usually fixed upon a straight handle, but the above sketch illustrates such a hook or scythe as is used by an experienced hedge-grower. He procures a stick with a natural crook like the above—the main handle being about 6 feet long, and slightly curved and turning so as to form as nearly as may be a right angle—to which short end, say 6 inches long, a short strong bush-scythe is attached; this affords a strong substantial implement, and the bend of the handle enables the operator to bring the whole length of the blade against the sprigs of the hedge, and yet avoid being scratched. The hook is used by striking upwards and laterally.—(*Prairie Farmer*.)

BEDDING GERANIUMS.

(Concluded from page 194.)

WHEN there is not convenience to winter Geraniums in houses without making these unsightly by a number of ugly boxes filled with the old stumps, the plants are denuded of their leaves and the old parts of the wood, leaving most of the roots, and placed in dry sand in a cellar, or in any cool place from which frost is excluded, and all the better if a tolerably equable temperature be maintained. In this position they remain until March, when they are either potted or placed in boxes in moderately rich soil, and removed to a frame with a gentle heat, a greenhouse, or any house of a similar temperature, water being given them as they commence growing; and when they have fairly pushed, any straggling or irregular growths are shortened. The plants are gradually hardened off, so that they may bear exposure by the middle of May, when they are placed under a wall or hedge prior to their being planted out. Such plants, though very unpromising, make very fine beds by August.

Another practice is to take up the plants on the approach of frost, and hang them up root upwards in a cellar or other place secure from frost, pulling off all the large succulent leaves, which if left damp-off and frequently communicate the disease to the stems. Such plants are potted in the following March, and placed in a greenhouse or frame with or without a gentle heat, and not unfrequently in narrow boxes 6 or 8 inches wide, and the length of a window. They are carefully watered, and after some time they commence growing, and are finally planted out in the open garden.

These plants recover wonderfully after they are turned out, and not unfrequently by August are equal to others grown under more favourable circumstances.

It is astonishing what a desire to have anything and perseverance will accomplish, and of this the following is an instance. In the village of A— was a cobbler noted for his Celery-growing, who had a desire to have a bed of Geraniums in front of his shop. Some gardening friend gave him a cutting of that strong-growing scarlet Geranium, common enough at one time, but now rarely seen—the Royal George. This variety would cover the back wall of a greenhouse in a short time, and a single truss of bloom would make half of a modern nosegay. The cutting was placed in some mould (the remains of a heap of wood), in an old teapot the spout of which had been broken off. Well, it struck root, grew rapidly, and was attended to by the cobbler and his wife like an only child. It had a place in the window that it might receive the morning sun, and when winter came it was brought into the warm kitchen to be out of the reach of frost. It will bloom, perhaps, thought the cobbler, when it had reached the top of the window, and this without so much as a branch all the way, being like a walking-stick with a few leaves on it. By-and-by it was planted outside, and it grew like a tree, and bloomed to the satisfaction of the cobbler, who prided himself on the probability of having as fine a bed of Geraniums next year as the squire over the way. How to accomplish this was the question. To preserve the plant during the winter he planted it in a tub which he made, but it died. The gardener was again appealed to, and this time the cobbler received a cutting of that old but not yet superseded Scarlet Geranium, Tom Thumb. It grew, and in a few years the old cobbler had a bed of Scarlet Geraniums, which were admired by many; and the squire, whose gardener had given him the cuttings in the first instance, admired them so much that the cobbler was much elated, and considered himself equal to the rector's boasting man, who was so clever in his management of Geraniums. Owing to some little altercation between them, a wager was made as to who would have the better bed of Geraniums in the following year. The cobbler had every box and pot that he could muster crammed with cuttings, and these he succeeded in wintering with the same attention as he had bestowed on the Royal George. However well they were wintered, he put his pots of cuttings outside in anticipation of a shower of rain, and left his home for the day. A hailstorm occurred in his absence, and the plants were destroyed. To purchase plants would lose the cobbler the day, so he was almost inclined to acknowledge himself defeated. It happened that he had pitted his Potato crop in the place where the bed of Geraniums had been in the previous summer, and the Geranium stems had been buried beneath the Potatoes, for on removing these in April, the old Geranium stumps had shoots upon them an inch long, and white like everything grown in the dark. The squire's gardener over the way volunteered his aid, and it resulted in the cobbler placing some sticks over the Geranium stumps, and covering them at night with straw, but taking it off during the day. In conclusion, the cobbler defeated the rector's man, and won the wager, and this so chagrined the loser that he gave notice to leave, and the cobbler was appointed in his stead. He is now a hale old man, pensioned by the same worthy rector at his death; and if you come into conversation with him about Geraniums, he will say, "There is no better way to keep them over the winter than to pit them like Potatoes." We may learn from this that there are many different modes of wintering Geraniums, and to describe them all would be tedious.

In wintering the Variegated, and small or weak-growing Scarlets, it is necessary to pot them or place them in boxes, without taking off more than the bruised extremities of the roots, and to thin the heads if large and unwieldy, without reducing them much, or shortening the branches. Some kinds, as Golden Chain, will not require the head to be reduced at all, it being desirable to obtain as large plants as possible. Such as Bijou, Mangiesli, Flower of the Day, and others, should not be cut-in too much, though they will bear more autumn-cutting than many sorts. The shoots left ought not to be shortened, and no leaves should be taken off except such as are old and useless.

Whether potted or placed in boxes the plants should not be kept in cellars, nor in any dark place, but in a light, airy situation in the greenhouse, water being sparingly applied, and only when necessary, and all decayed leaves must be removed as they present themselves.

In March the plants should be potted, if planted in boxes in the autumn, placed in a higher temperature, afforded moisture, and in a week or ten days cut-in closely. If no suitable house be at command, they must be potted as above, but not be cut-in so closely, as they will not push so freely. Except in this the treatment of the Variegated and smaller kinds of *Scarlets* does not differ much from that recommended for *Scarlets* generally; they require, however, rather more heat, less pruning, and greater care as regards watering, and hardening-off in the spring prior to planting out. The greatest enemy of *Geraniums* in winter is damp, and a close vitiated atmosphere. A high temperature is also injurious, as it causes growth at a time when it cannot be properly consolidated. Hence weak, lanky growths which never become strong are the result.—G. ABNEY.

WORK FOR THE WEEK.

KITCHEN GARDEN.

WEEDS this season may, with half the usual trouble, have been quite eradicated. Potatoes and other crops are coming off early, so that the process of manuring and trenching may be prosecuted at every favourable opportunity. We would never recommend, if it can possibly be avoided, to dig the ground intended for general cropping simply one spit deep. Even if the soil be shallow and the subsoil ungenial we would remove the top and well break up the bottom of the trenches; these operations pay for a little extra trouble, and now is the time to commence them. *Cabbages*, let all the remaining summer sorts of a solid character be cut over in order to obtain a good succession of sprouts. See that the ground is in readiness for transplanting the winter *Cabbages*. Remove all dead and decaying leaves from the *Brassica* tribe in general to some ground under the process of trenching, and keep the earth well stirred about the plants. *Carrots*, sow *Early Horn* in a sheltered place to stand the winter. *Cauliflower*, to be looked over frequently, turning down a few leaves over the hearts, for they are readily spoiled by frost. *Celery*, that which is not earthed-up must have the soil stirred about it with a fork, and frequent applications of liquid manure. *Chilies*, these and *Gherkins*, *Onions*, and other vegetables used for pickling, should be gathered for the purpose as they come in. *French Beans*, provision should be made for protecting them from frost, should this occur. *Lettuce*, let a lot of *Brown Dutch* or *Bath Cos* be planted where they can be protected by frames for spring use. *Tomatoes*, train, stop, and thin the laterals, but avoid stripping off too many leaves. The cultivation of *Watercress* should not be omitted in the series of salads. Bottles with their necks broken off and plunged in the ground, saucers, and any other shallow vessels to hold water will do to grow it in. A yard square will give a useful supply; and all the attention that will be required will be to fill up any deficiencies of water caused by evaporation. A damp shady border is not unsuitable; but wherever the advantage of a small stream is possessed preference should be given to it. If the trimmings of the bunches are thrown in throughout the season a regular supply of fresh young cress may be obtained.

FLOWER GARDEN.

As cold nights may soon be expected, scarce plants which it may be desirable to secure before they are injured should be taken up and potted at once, or carefully covered where there is the least cause to suspect injury. See to securing a good stock of cuttings of variegated *Geraniums* before the plants are injured by frost; for although these root more freely in spring than at present, such varieties as *Golden Chain* and *Mountain of Light* grow so slowly that spring-struck cuttings make but very poor plants by turning-out time. *Hollyhocks* and *Dahlias* will now require occasional looking after to secure them against the effects of high winds, which may now be expected. Unless seed is wanted, cut away decayed flowers and useless shoots. *Herbaceous* plants will likewise require the stalks of decayed

flowers removed, and such as are still in bloom carefully tied up. *Asters*, some *Phloxes*, &c., will now be making a fine show, and should have corresponding care bestowed on them. Let the borders be cleaned and neatly raked over, filling vacant places with spare *Chrysanthemums*, spring-struck *Pansies*, or spring-flowering bulbs. Though we advocate the autumnal planting of evergreen and deciduous shrubs, we would not recommend their removal at an earlier period this month as long as the late very dry weather continued; but the happy change in the weather will now enable those to proceed vigorously in their operations who intend alterations or new arrangements in this department.

FRUIT GARDEN.

Look over wall trees, and cut off all foreright breastwood, or what are called "after-shoots." Strawberry plants in pots must not be allowed to get very dry, nor ought they to be drenched with too much water. General attention to gathering all sorts of out-door fruits as lately directed.

STOVE.

A certain and gradual reduction of temperature corresponding to the deficiency of external heat should be commenced, the plants will thus be prepared to withstand the prolonged gloom of the winter season. All stove plants, which have been removed to the conservatory or other houses, should now be brought back to their permanent stations without delay, both for their own sakes and for the sake of the general arrangement in other structures. Give most liberal ventilation, not forgetting, however, to accompany it with much warmth; for the hardening of growths is not carried on by means of chilling draughts, but by high temperature accompanied by a free perspiration from the leaves of the plants. Much attention must be given to watering under the above circumstances.

GREENHOUSE AND CONSERVATORY.

Unremitting attention must be given at this period to the housing of tender plants until the whole stock is secured. The *Persian* and other *Cyclamens* should be examined and repotted where necessary. The *Lachenalia* family should now be brought forth and repotted; such on a greenhouse shelf will flower in February. *Camellias*, Chinese *Azaleas*, and some *Acacias*, will not be hurt for a week or two, if circumstances do not permit of their being housed immediately. Greenhouse and stove plants of an herbaceous character, after they have done blooming, should have some care in order to ripen the roots properly before they are stored away for the winter. To effect this with *Achimenes*, *Gesneras*, and *Gloxinias*, they should be placed in a spare house or pit near the glass, and only supplied with water to keep them from flagging. *Amaryllis* and the different varieties of *Japan Lilies* require the same treatment, the latter, however, being more hardy may be ripened off at the base of a south wall or cold pit. Admit air night and day to all descriptions of greenhouse plants. In many species the growth is not yet perfected. This may be assisted on sunny days by early closing for a couple of hours in the afternoon; but open the house again at six for the cool night temperature.

PITS AND FRAMES.

These should now be furnished with bulbs of the most approved varieties for forcing, *Pinks* in variety, *Neapolitan* and *Russian Violets*, and sturdy young plants of *Wallflowers* in variety. *Mignonette* to be thinned in due time, *Intermediate Stocks* pricked-out, one in a small pot, *Cinerarias* repotted, and herbaceous *Calceolarias* parted and potted, and plunged in cinder ashes in a cold frame near the glass.—W. KRANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

THOUGH we have as yet no water for vegetables, the mild showers have moistened the surface of the earth, and enabled us to prick out *Cabbages*, *Cauliflowers*, *Lettuces*, *Endive*, &c., with but homœopathic doses of moisture at the roots. The air is now so moist that plants that have had a fair start will not suffer much. Could we have planted out lots of winter stuff by the middle of June, the plants would not have suffered from the drought; but our limited space was then as thickly cropped as could be. The slight showers and what little sewage we could give, is now taking the

slaty appearance from our vegetables. Cauliflowers with out-
standing never was better, and succession crops are now
coming in between Peas, which we have left standing long
after they were withered, that they might give shade to the
Cauliflower. No time should now be lost in taking up Po-
tatoes in the southern districts. The less time they remain
in the ground after the haulm decays the better they will
keep.

It is a good plan to sow *Lettuces* rather thickly now on
hard ground, that has merely been slightly hoed and raked,
either at the bottom of a wall, or fence, or on the open
ground in beds, with shallow trenches at each side, to take
off the winter's moisture. The harder and the poorer the
ground, provided there is enough loose soil for the plants
vegetating, the better will they stand the winter, and the
more stubby will they be in spring.

Now is also a good time for pricking out *Lettuces*, some
2 or 3 inches high, in rich soil about 3 inches apart, to be lifted
in a fortnight or three weeks with a trowel, and placed in
pits or frames 8 or 9 inches apart for the winter. Such pits
and frames are none the worse of having some dry litter
placed at the bottom before the earth is put on for the
Lettuces. This answers better than an old hotbed, the dry
litter and plenty of air being a good preservative against
damp and mildew. Snow's Matchless, a hardy green
Lettuce, and Brown Cos, are good as Cos *Lettuces*, and Hardy
Hammersmith and Victoria are capital Cabbage *Lettuces*
for that purpose. Such plants may be expected to keep up
a regular supply until the middle of March, when those at
the bottom of the fences will come in. Two things are
essential to success: first, that the plants be pretty well
established before winter; and, secondly, that the surface
soil be pretty dry by the first week in November. Young
plants may be put in the pits and frames at once, if the
latter are at liberty. A third essential to success, is not
placing the plants thicker than mentioned above, if they
have to grow and come in in succession. We have filled a
frame at the commencement of winter with good plants
lifted carefully then, and though they did for current use,
they never thrived like those that were planted out young in
their winter quarters. In some places *Lettuces* are as much
run after in winter as Potatoes, and in such circumstances
some care must be had to secure them. Where it is under-
stood that they will not be wanted, of course all the trouble
may be saved, and the room be devoted to other purposes.

We have now removed most of the branches that shaded
our Celery, and they and a little mulching we hope have
done much to make amends for no watering for nearly two
months in the hot burning weather. The season has con-
vinced us more if possible than heretofore, that in such
periods of dryness much may be done by deep stirring, sur-
face-moving, mulching, and frequently turning the mulching,
if at all thick. What has suffered most with us are autumn
Peas. What used to be fine in September are pretty well a
wreck.

Bindweed-killing.—"No GAMMON," writes us to say, "That
he has never known the weed destroyed by hoeing as we
stated last week; that he does not believe that it can be so
destroyed; that it is very wrong of us to hold out such vain
inducements; asks if we have thoroughly eradicated it,
&c." To the last we reply, No! just because in the busy
season it is apt to obtain the ascendancy before we notice it
or get to it; but we have no doubt the hoe will master the
enemy if the attack is made in time, and repeated in time.
We cannot help any man's belief or unbelief, that is a matter
that rests with himself, and if "even convinced against his
will," strong-minded people will often pretend to be "of
the same opinion still." Acting in good faith, we may derive
instructions from the doings of men, and yet not be at liberty
to mention their names publicly. There might be no great
liberty taken in doing so in the present case, though it is
best to be sure; but if "No GAMMON," will give us his
name and address in confidence, we will in the same con-
fidence give him the address of the gardener and the place
referred to, and then he can satisfy himself whether we deal
in fancies or in facts.

Mushroom-growing.—"UNFORTUNATE" would be much
obliged if we would give a little more elucidation of the
expression at page 197, "Whatever the materials are, it is
our part to vary our treatment according as we find them."

Most willingly, though it must be in a few words. We have
several times stated that horse-droppings, with a little litter,
are the best material; but we have used for the bulk of our
beds almost anything that would yield a mild heat from
decomposition. One of the best beds we had last season
was made of three parts of stubble and one of long litter,
thrown together, and wetted a little to make it heat, and as
soon as it smoked a little it was put as firmly as possible
into the bed 16 inches deep, and covered over with a couple
of inches of droppings. This material we knew would heat
and cake itself pretty dry, and thus lose heat; but by making
some holes about 2 feet apart in the bed with a round stick,
and pouring in some water, we set the bed working afresh,
and thus the crops were prolonged. If the bed had been
made of moister materials the plan would not have answered.
Again, we have made the great bulk of our beds of fresh
fallen tree leaves. They are apt to produce fungi of many
sorts. To prevent this throw them into a heap to ferment
violently, which will kill most of the fungi of all kinds, and
then when trodden in a bed of moderate thickness they will
long retain a mild regular heat. These, surfaced with
2 or 3 inches of droppings, will make a capital bed.

If common horse and cowdung, along with litter, is
wrought and turned in a heap, so as to be fit for a
Cucumber-bed, it will be in first-rate order for a Mushroom-
bed. If that should be rather dry you could give a casing
1 inch thick of moist manure—horse or cowdung. If from
the weather or other causes the material should be too wet,
each piece of spawn should be wrapped in a handful of dry
short litter. The fresher the materials are, provided there
is no overheating, the greater the success. The state of the
materials, as respects dryness, is also of importance. We
have seen horse-droppings turned and dried, and turned
again, in sheds, until all the virtue was driven out of them,
and then beaten firmly into beds, which did little good,
because they were made too dry, and kept too dry by means
of a fire without a moist atmosphere. A little more
moisture and freshness in the material, and a coating of
moist material after the spawning, with a moist atmosphere,
would have made all right. In winter, especially, it is some-
times difficult to obtain the material dry enough. It is
best when it is about the dryness of soil we use for potting
—that is, you may squeeze it in your hand, and it will retain
all the traces of your fingers, but when you lay it down it
will crumble into pieces. We have made beds with material
so damp that one could squeeze the drops of moisture out
of it. This is much too wet for the spawn to run in. It
exhausts itself, or is quite destroyed. In such circumstances
inserting the spawn into the handful of dry litter, and
keeping it pretty close to the surface of the bed, was the
safety valve. The spawn ran freely in the litter, and the
damp surroundings proved a rich feeding ground. So much
then as to materials and their condition, which is nearly of
as much importance as temperature, but which was suffi-
ciently alluded to in a late article.

FRUIT GARDEN.

Commenced clearing the lines of Strawberries, will sur-
face-hoe or slightly fork, and then place litter and dung
between the rows. Would have done so earlier but for the
drought and the deficiency of mulching material. Gave a
little more room to Strawberry plants in pots that the crowns
might be better ripened. Have kept them growing chiefly
with a little sewage water. They are mostly in 40-sized
pots this season. The forced ones planted out have given
little fruit this autumn owing to the dryness. Figs out of
doors have thrown off a number of their fruit from dryness
at the root, and we could not help ourselves. The orchard-
houses which have borne amazingly, are pretty well emptied
of their contents, with the exception of Figs in pots, Plums,
Pears, &c., in pots, and late Peaches against the wall. Our
chief objection to the pots is the water they require, and our
scarcity made us resort to some rather questionable liquids.
To Figs planted in the house we gave a good watering with
sewage water, and kept the house closer for the second crop
which is now coming in. Syringed the trees done bearing
in orchard-house with clear soot and clear sulphur water.
On a dull day shut up the Peach-house, put a fire to the
boiler, and painted the pipes with sulphur, and when hot
syringed the house wall, as the red spider appeared from
the dryness. For two months past we could do little syring-

ing. We resorted to it in the conservatory, because by that means, shading, and little air, much less water was required than would be needed for watering the plants. Gave water to Melons looking a little distressed, giving it chiefly to the roots without wetting the surface soil much, as the drier the surface now the better the flavour. Picked out any decaying berry from Grapes, and removed all the laterals from the early house, and about half from the late house, to admit a little more light. Gathered Plums, the last of Apricots, and a good many of the early Apples, and commenced with two parcels of Williams's Bon Chrétien Pear from the same tree. One tree may thus last six weeks, by taking the largest and ripest first. If all gathered together the fruit would be in good condition only a few days. The winds have rattled down much fruit prematurely, and if possible it should be gathered up, as if left it gives an appearance of carelessness. Apples we suspect will be very cheap this season, which will be a boon to our brethren in "cities pent." The ripeness of Apples and Pears is best known by the brown colour and firmness of the seeds.

ORNAMENTAL DEPARTMENT.

Our work here has chiefly been threefold. First, potting stove and greenhouse plants, and Primulas and Cinerarias, and taking Camellias, Azaleas, and hardwooded plants at all tender, under protection, or at least where they can be defended from heavy rains. Many ornamental plants of an annual character, as scores of fine Balsams in full bloom, Feathered Cockscombs, Browallias, we were forced to throw to the rubbish-heap, as we could not water them, and keeping them dry in houses or pits would have been no pleasing sight, and would most likely have furnished us with shoals of insects. Secondly, we drew the scythe over most of the pleasure ground to make all level, for there was little to cut, the mowing machine having enjoyed a sinecure this season, then clipped the edges and dressed the sides of beds, and rolled the grass, which is now becoming greenish, which improves the look of the flower-beds. The skiffs of showers and high winds have thrown off many of the Calceolarias flowers, but the shaded side of one pyramidal bed still looks massive—in fact the Calceolarias, though now far past their best, have stood the dryness much better than we expected they could do. Scarlet Geraniums are still very fine, though beginning to seed, and the dryness will prevent much succession. These unwatered beds in this parching season have led many people to suspect that there may be over-watering. Most of our amateur brethren declare that they will grow Geraniums in future, and have nothing more to do with Calceolarias; but what if next summer should be a dripping one? for then Calceolarias would be in their glory. It is amazing the interest taken in flower-beds by the possessors of small places. A manufacturer who has only had two seasons of practice, surprised us by knowing as much or more of the character of bedding plants than we did. With such masters gardeners must not be idle or behind the times. Thirdly, though loathe to disfigure our beds, we are now taking off cuttings of Geraniums, &c., in earnest, but selecting pieces that will make as small a gap as possible. These are mostly placed in moveable wooden boxes, 2½ feet long, 9 inches wide, and 4 inches deep, one end being moveable. We use lumpy soil for the bottom, and finer fresh soil with a little sand for the top, and plant the cuttings from 1 to 1½ inch apart. The boxes are chiefly made from elm because we can obtain it easiest, made up at once from the saw, and then painted with lime wash inside and outside, as a preservative chiefly against fungi and moulds. It is a nice job for labourers to make them on a wet day. Gardeners in these times must be pretty well Jacks of all trades, and many labourers like such work rather than otherwise. In these days of the division of labour, it is generally best to have the right tradesman for his general work; but there are first-rate employers who would rightly object to bring a mechanic from a distance to do a trifling job. The men who go through the world most comfortably and often make themselves felt in it as a bettering influence, are men who do not stand upon trifles, argue about their rights, and decant about what they were engaged to do; but at a pinch do what is wanted, and without claiming extra merit or thanks for doing it. We once knew the greater portion of a glass house unroofed in a storm because the gardener

add nothing to stop up the gap of a few broken squares. He had given notice that a glazier was wanted and that was enough for him. He was not to turn glazier. No, not he! When the storm came on, he should have thought of the gap, though. Did his keeping strictly to his engagement advance his interests?—R. F.

COVENT GARDEN MARKET.—SEPTEMBER 10.

Heavy supplies both of home-grown and foreign fruit continue to arrive. Grapes, Figs, Peaches, Nectarines, Apples, and Pears are very plentiful; and Oranges have become more so in consequence of consignments of autumn fruit from abroad. Vegetables are abundant. Turnips, however, are very scarce. Of Potatoes there is a heavy supply, and the quality is good; the prices have therefore declined.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.	
Apples.....½ sieve	1	0	to	2	0	Malberries punnet	0	6	to 1	3
Apricots do.	0	0	0	0	Nectarines do.	2	0	0	0	
Cherries lb.	0	0	0	0	Oranges 100	12	0	20	0	
Currants, Red...½ sieve	0	0	0	0	Peaches do.	2	0	0	0	
Black.....do.	0	0	0	0	Pears (kitchen).....bush.	0	0	0	0	
Figs do.	1	6	3	6	dessert.....do.	1	0	3	0	
Liberts & Nuts 100 lb.	45	0	60	0	Pine Apples lb.	4	0	5	0	
Gooseberries ½ sieve	0	0	0	0	Plums ½ sieve	2	0	5	0	
Grapes, Hamburgs lb.	1	6	4	0	Quinces do.	0	0	0	0	
Muscats do.	3	0	6	0	Raspberries lb.	0	0	0	0	
Lemons 100	12	0	20	0	Strawberries punnet	0	0	0	0	
Melons each	1	6	4	0	Walnuts bush.	14	0	20	0	

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes each	0	4	to	6	Horseradish ... bundle	2	6	0	0
Asparagus bundle	0	0	0	0	Leeks.....bunch	0	4	to	6
Beans Broad.....½ sieve	0	0	0	0	Lettuce.....score	1	6	2	0
Kidney.....½ sieve	3	6	5	0	Mushrooms pottle	1	6	2	0
Beet, Red.....do.	1	0	3	0	Mustd. & Cress, punnet	0	2	0	0
Broccoli bundle	1	0	1	6	Onions bunch	0	4	0	6
Brussels Sprouts ½ sieve	2	0	2	6	pickling.....quart	0	6	0	0
Cabbage do.	1	0	2	0	Parley do. bunches	4	0	6	0
Capicums 100	3	0	5	0	Peas.....do.	0	9	1	0
Carrots bunch	0	5	0	8	Peas.....quart	0	0	0	0
Cauliflower do.	0	0	0	0	Potatoes bushel	2	6	4	0
Celery bundle	1	0	2	0	Radishes do. bunches	0	0	0	0
Cucumbers each	0	6	1	0	Savory do.	0	0	0	0
pickling.....do.	1	0	2	0	Sea-kale basket	0	0	0	0
Endive score	1	3	2	6	Spinach.....sieve	3	0	6	0
Fennel bunch	0	3	0	0	Tomatoes.....½ sieve	2	0	3	0
Garlic and Shallots, lb.	0	8	0	0	Turnips bunch	0	8	0	0
Herbs.....bunch	0	3	0	0	Vegetable Marrows do.	2	0	3	0

TRADE CATALOGUES RECEIVED.

Barr & Sugden, 12, King Street, Covent Garden, London.—*Compendium of Illustrated Autumnal Floral Guide to Winter and Spring Gardening.*

Hooper & Co., Central Avenue, Covent Garden.—*Autumn Catalogue of Dutch, Cape, and other Flowering Bulbs.*

B. J. Edwards, 222, Strand, London.—*Autumn Catalogue of New and Choice Hyacinths and other Bulbs.*

TO CORRESPONDENTS.

* * We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

MELONS NOT SETTING FRUIT (J. J.).—The vines are probably too dense, and the pollen is not sufficiently aired to be fertile; the bed may lack water; the atmosphere may be moist through an insufficiency of air; and too little bottom, or too much top heat, with a close stagnant atmosphere, may be the cause of their turning yellow. The sort is a free setter. Without an outline of the treatment we are unable to speak definitely as to the cause.

FLOWER OF THE DAY GERANIUM CUTTINGS FAILING (J. A.).—The cuttings were probably potted in a rich compost, and were watered very freely, and the soil turned into a bog. We have many now struck in such a place; but they were not shaded except for an hour or two during the hottest sun, nor watered more than to keep the soil just moist.

MULE PINK (A. E.).—It is a curious example of morphology, and, like all others, seems to afford no clue to the cause.

STRAWBERRIES (Ignoramus).—For one early variety, plant Keen's Seedling; and for one late variety, the Elton.

FUNGUS IN TAN (G. R.).—See an answer to a correspondent in last week's Number, page 198.

STOCKS (Moose).—If it is Brompton Stocks you mean, it is now too late to sow them; but if you mean Intermediate Stocks sow them forthwith in a cold frame, and, when of sufficient size to handle, prick them off singly into small pots, or insert two or three in a 48-pot. Keep in a cold frame, with air daily in mild weather, protecting them with mats from severe frosts. Repot in spring if they are desired to bloom in pots, employing 24's for single plants and 18's for three's. A compost of good loam, with a little leaf mould added, suits them well. They should be sparingly supplied with water during the winter; but when brighter weather, and the plants are growing freely, water proportionately. They may be planted out-doors in the latter part of April where they are to bloom.

MOSS ROSES OVER-LUXURIANT (J. K. D.).—Moss Roses are seldom over-luxuriant. Probably the soil is too rich and deep, and the wood is, therefore, not well ripened in the autumn. We should try moving them in the beginning of November, and see what effect that would have upon them; and keep them rather close pruned. Almost all hardy annuals would, we should think, do well with you, especially Candytufts, Larkspurs, Virginian Stocks, Venus's Looking-glass, Collinsias, Clarkias, Lupines, Nasturtiums, Bartoniads, &c.; and in the greenhouse all the half-hardy annuals would do well. We shall have something to say about annuals in pots when the time shall arrive.

DRAIN FOR MELON-PIT—EASTER BEURRÉ PEAR (A. Q.).—Unless the soil be spongy and wet a drain is not necessary; but if water drain into the pit from adjoining ground a drain should be provided to take such water away, or it will quench the fermentation of the dung. The Easter Beurré Pear is rather a shy bearer; but we have a fine crop this year on an espallier, and free from rust. We have it on a wall, and it does fairly, though not equal to many. As a rule, this year our trees on walls are not bearing so well as those on espalliers. Try the tree a little longer, root-pruning it if you think it is too vigorous, but mulching round it to the extent of the roots with half an inch of short manure if it be weak. It is a good Pear.

CAROLINA ALLIÉE PROPAGATING (Q. Q.).—1. It is best increased by layers, operating upon them in early spring (March). 2. Cuttings taken from anything out of character are liable to return to the original state. In taking cuttings of variegated Geraniums make choice of those parts showing the variety in character. It is seldom that entirely white leaves of Geraniums can be perpetuated by cuttings. 3. The Verbena has done very indifferently with us this season; the finer kinds have barely existed. We think this is due to the season; but, as this does not bear on your case, we know of nothing beyond what you have tried likely to get them to do better than to change the stock. We have found this successful when other remedies have failed. 4. Seeds of French Marigolds are usually perfected in England, and so are those of Tagetes pumila; but whether they are worth sowing or not depends on the doubleness of the flowers of the former. The seed of badly-formed, badly-coloured, and semi-double flowers is not worth sowing. Tagetes pumila is generally good, though occasionally it is not sufficiently ripened, and the seeds do not germinate.

MIMULUS CUPREUS AND TROPÆOLIUM SPECIOSUM CULTURE (Heater).—Mimulus cupreus is a half-hardy perennial, and will not, therefore, do outside except in very favourable situations. Keep it in a pot in a cool part of the greenhouse, on a shelf near the glass, and water moderately during the winter, but do not dry it off. Sufficient water to keep it fresh is necessary. If you want stock take cuttings when the plant commences growing in the spring, these will root freely in a little heat; or you may take away rooted offsets now, or in the spring, and pot them at once. The Tropæolum speciosum should be rather sparingly supplied with water in winter, but it must not be allowed to become dust dry, or it will suffer, if not perish. It does well in a compost of light turfy loam two-thirds, leaf mould one-third, with a free admixture of silver sand. It winters safely in a greenhouse, but does not like damp. A light airy situation is the most suitable.

DRESSING A MEADOW ON HEAVY CLAY SOIL (An Amateur).—The best way to apply lime to such a soil is to mix it with four or five times its bulk of mould—say the turfy lumps from the sides of ditches, or any coarse soil that does not contain too many stones. This mixture ought, however, to be prepared a few months before laying it on; but lime quickly destroys vegetation, and assimilates itself with the soil with which it is mixed. A good coating of a mixture of this kind—say twenty or twenty-five loads to the acre—laid on in November, and brushed in with a thorn harrow in March, would be better than the blood manure; but, as it may be too late to prepare this mixture, we would advise you to lay on rough stable-manure as soon as you like, allowing the rain to wash in its nutritive matters during the winter, and in March rake off with a hay rake all rough straw matter, and apply the dressing of blood manure. The latter ought to be given just before rain, if it can be managed so.

GLADIOLUS BULBS TAKING UP (Pond-dhu).—In general these are better taken up when properly ripened. In a dry sandy soil they may be left in the ground, as we have done with tolerable success; but in that which is of a damp or clayey nature they are so liable to decay, or fall a prey to slugs or other enemies, that it is better to take them up.

PETUNIA, PHLOX DRUMMONDI, AND SAPONARIA GROWING TOO LARGE (Idem).—It is difficult to keep these to the dimensions of Tom Thumbs, Lobelia speciosa, &c. Petunias may, however, be cut so as to be kept pretty low; but Phlox Drummondii will show very little flower unless allowed free growth; and the Saponaria can only be rendered dwarf by poor soil. If, however, you are anxious to have beds of uniform height, you had better only use Verbenas, dwarf Calceolarias, Geraniums of the various kinds, Lobelias, Cerastiums, and other plants which either grow about the same in height, or allow of being cut to that standard, and plant the larger and more uncertain kinds in outside beds or borders of a mixed character. Saponaria, however, is generally dwarf and compact enough, and we should have thought that the present dry summer would have kept it more so. Trimming this cannot well be effected. Thinning the plants, however, early in the season, may do good.

SHEDDING RHODODENDRONS (D. Dobson).—It is now time the plants were ceasing their growth. Better, therefore, gradually harden them off by more air, and withhold water to a certain degree. As the plants are so small, we would not prick them out until March, keeping the seed-pan or boxes in some cool place, secure from frost and damp. The latter is more especially fatal to the kinds partaking of the Bixhim breed, whose rough leaves seem to invite more moisture than the plant can endure in our damp winter climate.

VINE-BORDER RENOVATING (T. W. U. R.).—If your Vines be in good condition, we would not advise you to meddle with them; but, if becoming bad, we would recommend their being entirely taken up, and the border remade, as advised by Messrs. Fish and Thomson in some of their papers on the subject. If, however, a sort of half measure be advisable, we would say examine the points of the roots, and, if the ground be bad, remove it, and replace with a more suitable compost. We have known plenty of Vine-borders not wider than 10 feet, and yet do well; but if the roots seem disposed to travel farther, then by all means allow them. Of late years an open porous soil is thought the best for the Vine—one that will allow quantities of liquid manure being supplied without creating sourness. Lime in some way is an essential ingredient in the compost, but the kind called magnesian lime is improper. We have seen good results from using carbonate of lime, sea shells in liberal quantities, old mortar rubbish, stone shatter, and many other things, avoiding too much manure, which, after a time, seems to sicken the Vine, and it rarely succeeds well. If you are in that state we should say, Take them up as soon as ever the wood is ripe, carefully preserve all roots, plant these near the surface in the new border, and success will be certain. We have even known a tolerably good crop in the first year of the change; but this is not always to be expected if the Vines have been bad before. Partially lifting them may do good if they are not so far gone, and the roots being enticed into a new medium, great improvement may be expected.

LABEL CUTTINGS (An Old Subscriber).—Well-ripened shoots of the current year, with just a little heel of the old wood at their base, and about a foot long, may be put in by the end of September, or sooner, if the ground be moist; and, if buried more than half their length in the ground, they will nearly all grow. Trimming off the leaves that would be buried underground should be done, but a little branchiness of top is of no consequence. In a lot we put in last year in this way, we find several of them have grown sufficiently to be transplanted in the present autumn, and not more than two per cent. have failed.

STOVE FOR SMALL GREENHOUSE (J. D.).—It is questionable if the stove that you have would not suit you well enough, if you burned broken coke in it, and had a small chimney of sheet iron from it. No stove without a chimney is safe either for you or the plants, if the latter are tender and growing. A small iron flue, for about 35s. or 40s., would suit your purpose. The chimney may go through the roof, by taking out a square of glass, and substituting a square of sheet iron, with a hole in the middle.

RIBBON-BORDER PLANTING (F. J. C.).—Straight or serpentine lines in a ribbon-border are purely a matter of taste. The straight lines are best, when seen from each end, in our opinion. The use of Cerastium in the circular beds, we would have better determined if we had known the size and the arrangement of the beds. For a row of Cerastium it should be planted in lines. If cuttings are put in next month, or this month (say 3 inches apart), they will make a dense row, if looked after, of 3 to 5 inches broad, next season. If to be mixed with some low-growing thing, the Cerastium may be planted much thinner. In your border we would place your plants thus:—Trentham Rose, Perilla, yellow Calceolaria, Scarlet Geranium.

HEATING PITS (C. G.).—For a house or pits the size you speak of, you will want two four-inch pipes for top heat, and the same for bottom heat. One of each might do for the front pipe, but two three-inch pipes, above and below, would be better. We presume you have valves to shut off the front or cooler pit when you choose. We perceive, also, that you mean to heat one of the early pits for Cucumbers by itself, and of course that will require valves. Mr. Fish has no difficulty in heating each range separately, though each range has several divisions, as the air-giving makes the difference in temperature in the different divisions, and valves are dispensed with, which, if numerous, become expensive. If you can feed from the top of the boiler, then a cylinder or tubular boiler would be best for wood, as you could put in pieces nearly the height of the boiler. To do the work you speak of the boiler had better be 16 inches wide, inside measure, at bottom, and 80 inches in depth. The wood, if dry, will burn all the better, and give more heat; the cinders will do for banking up with at night. For a saddle-back it should be the above width and length, for wood at least; and the furnace-door should be larger than for coal—say 12 by 16 inches. If a saddle-back is used, and there will be little difference in the result, the boiler should stand as much as three or four bricks above the furnace-bar, so as to give more room for the wood. If you cannot well feed the boiler from the top, the saddle-back will be the easiest managed. If you can so feed the fire, the cylinder will be the easiest managed. In either case, instead of setting the boiler on bricks, though fire once, it will be better to set the boiler on fire lumps of the suitable height, as bricks are sooner injured by wood than by coals. When you are laying down your pipes, do not stint the quantity. There can be no more false economy than being forced to keep up heat by heating the pipes nearly to boiling-point. The consumption of fuel, and the extra trouble, will soon cost more than the extra piping; and nothing will thrive so well with pipes very hot as when these are rarely warmer than you can put your hand on them. We would like more explicit information as to the ice, mode of ventilating, &c.

ORCHARD-HOUSE PRACHES SPOTTED (Ramsgate).—We suspect that the red spots are owing to the attack of insects when the fruit was young—green fly or brown beetle. The other appearance, of imperfect stones, is owing to imperfect fecundation; but if the fruit is of good fair size, that is of less importance. It is caused by keeping the house too close and moist when the trees are in bloom, or just setting their fruit. If carried too far the fruit is sure to drop prematurely.

HEATING VINERY AND CUCUMBER-HOUSE (A. A. P.).—If you stop the flow-pipes for bottom heat by valves, you need not trouble yourself about the return-pipes. The simplest plan, as you have not yet done the work, would have been to place the boiler between the Cucumber-house and the vinery, and then take the heating pipes right or left, furnishing the flow of each with a valve. A simpler plan still would be thus to place the boiler, take the flow-pipe into a small cistern in the vinery, 18 inches above the highest heating pipe; let that cistern have three other holes for pipes besides the flow-pipe; let one of these join the flow-pipe in the vinery, a second the flow-pipe for top heat in the Cucumber-house, a third for flow-pipe for bottom heat; and thus, by means of three wooden plugs, you can heat where you like.

VERENAS (S. C.).—Too faded and destroyed by post-stampers to be distinguished; but even if fresh very few could be recognised from a truss of flowers, the varieties are so numerous, and so approach one another in colour and form.

LINUM FLAVUM TRANSPLANTING IN AUTUMN (E. M.).—You may safely remove this a month or so before severe weather sets in; but, should you be overtaken by the frost before the plants are fairly established, covering them with a little fern, laurel boughs, or other protection, will enable them to live through the winter. Very severe winters sometimes kill this plant, especially in damp situations, but generally it lives through the winter and does well.

BEDDING GERANIUMS (Stella).—We have not grown Trentham Scarlet Geranium; but, from what we saw of it, it struck us to be a variety of Tom Thumb, or Frogmore Improved, which beats all other Scarlets at Trentham. This is a peculiarity of many Scarlets, which do extra well in some one place. We have not seen Trentham Scarlet so good anywhere else except at Trentham. Can Mr. Henderson give us a note on the subject? In the generally moist climate there it is stronger-growing than Frogmore Improved in the south. Both it and Boule de Feu are good bedders. The latter has larger trusses of bloom, and throws them high—in some people's opinion rather high—above the foliage. The habit is rather stronger and stouter than Trentham Scarlet. With us the habit of growth is between Tom Thumb and Punch—the latter is very fine with us this dry summer. For a fair-sized bed we would give the preference to Boule de Feu, as compared with Trentham Scarlet, as the flowers are more massive, but both are good. With us neither of them are so strong-growing as Trentham Rose; but they are rather stronger growing than another fine rose, called Rose Superb. This latter is much the same to Trentham Rose as Tom Thumb is to Punch. The trusses of Boule de Feu are brighter and more compact than Punch, the long flower-stalks much stronger, and the habit of the plant more compact. As respects height, we would thus place those you name—Trentham Rose, Boule de Feu, Trentham Scarlet. Until you have tried the last two in your own garden you should grow both.

FLOWER-BED PLANTING (Ignoramus).—When the Geraniums are removed, you may make the bed very gay by planting it with bulbs and early-flowering plants. Plant Snowdrops, Crocuses, Hyacinths, Winter Aconites, and early double and single Tulips, a few patches of each, and to these you may add double Primroses, yellow Alyssum, white Arabis, Auriculas, *Dielytra spectabilis*, Hepaticas, and many others, but as you do not mention the size of the bed, we are not able to advise further. Our "Garden Manual," would suit you.

IVY PROPAGATING (Clare).—The easiest way of propagating Ivy is by layers. If you layer the young shoots in 24-pots in a dry kind of loose poor soil, and fasten them with pegs about half an inch below the surface, placing a stake in each pot and fastening the shoots upright to it, they will be rooted by spring, and may then be detached from the parent. The young shoots, from 6 to 9 inches in length, inserted in poor, light, well-drained soil in a cold frame now and kept moist, will root freely enough, and so they will if inserted in a shady border any time from March to October. London's "Self-instruction for Young Gardeners," will suit you.

BULBS (A Constant Reader).—As you wish to procure bulbs, we may name single and double Snowdrops, which should be potted forthwith. If you have any in your garden these are the sort to succeed with, for dried bulbs will not flower so well, nor force so surely. After potting place them in a cold frame. Of Crocuses, select Bride of Abydos, white; David Rizzio, dark purple; Sir Walter Scott, white and blue striped; New Giant Yellow; Lord Byron, bright blue; Versicolor, striped; Albion, white and blue striped; Large Yellow; La Majestueuse, striped; and Queen Victoria. Full particulars on the cultivation of these and other bulbs will appear in our columns shortly.

PEACHES FOR MARKET—FORCING VINES WITH CAMELLIAS (J. W. Ezeler).—We recommended the old Grosse Mignonne, which takes well on account of its size and colour. The Early Grosse Mignonne ripens about three weeks in advance of the Grosse Mignonne, but is a smaller fruit. It would, however, no doubt, sell. The Grosse Mignonne is a good forcer. If the Camellia bloom in January you may commence forcing the Vines shortly afterwards, or in the beginning of February, and the Grapes will be ripe in the end of July or beginning of August. By this process the Camellias will flower about Christmas; but if you commence forcing so as to have the Grapes ripe in June, the Camellias will bloom earlier—perhaps, after one or two years forcing, as early as October or November. To have Camellias bloom at or soon after Christmas the Vines should be allowed to start naturally, and be only assisted with fire heat at the time of setting and maturation of the fruit, which will be perfected in August.

SHRUBS TO SEPARATE FLOWER AND KITCHEN GARDEN (A Recent Subscriber).—As it is a bank we fear it will be dry, or you could not have anything finer than Rhododendrons and American plants. You may, however, have them if the soil is not too dry. In any case you may have *Berberis Darwinii* and *acutifolium*, *Ulex europæa plena*, *U. hispanica*, *Viburnum tinus*, Persian Lilac, Hollies of sorts, Ribes, *Prunus triloba*, *P. sinensis flore pleno*, *P. rosea alba*, *Pernettya angustifolia* and mucronata, double Syringa, *Pyrus spectabilis flore pleno*, *Myrica laciniata*, *Leycesteria formosa*, *Forstythia viridissima*, *Deutzia scabra* and gracilis, *Desfontainia spinosa*, *Daphne cneorum* and *mesereum*, *Cotoneaster microphylla*, *Corylus avellana laciniata* and *purpurea*, double Quince, *Cytisus secundus*, *Chimonanthus fragrans*, *grandiflorus*, and *luteus*, Box of sorts, *Cistus ladaniferus*, *Calycanthus floridus*, *Aucuba japonica* and *lati-maculata*. We would not have one of these if there were any chance of American plants succeeding. If the soil is moist they will do well unless it rest on or is limestone.

MANETTI STOCKS (S. G.).—Plant them on the level, and keep manure away from them. If any be wanted dig it into the soil, and not in close proximity to the stem. It is not necessary to cover the bud with soil to protect it from frost, but some do so. If covered at all it should be with soil, and not manure or sawdust. If the soil be light, and the stocks budded with tender kinds of Roses, draw a little soil round so as to cover the buds; but if strong a little hay wrapped round them is as good as burying them. It should be removed in dry weather. Wet passing into the union of the bud with the stock is frequently more fatal to the buds than frost. In spring cover the stock with soil to a few inches above the bud, so that the Rose may have a chance of emitting roots as well as the stock. The stock may be stopped or shortened slightly when the budding takes place; but they should not be cut close until the bud has broken, for the portion of the stock above the bud is necessary to draw the sap into it. They may be planted in the places where they are to remain in mild weather from October to April, but the earlier the better. November is best, planting them so that the union with the stock may be 3 inches below the surface.

FORCING VINES IN POTS (A Maidstonian).—We fear that you will not be able to kill two birds with one stone. If you force the pot Vines as you propose, we would plant them out now, so that they may be established before autumn, and we would not force the pot Vines so early as you name, but defer it until the beginning of March, or at least not start them before the middle of February. We do not see what you will gain by forcing them at all. Newly-planted Vines should be allowed to break naturally, or with a slight assistance from fire heat, and should be grown slowly so as to secure a strong cane, which may be ripened fully in autumn by the application of fire heat. If you commence forcing pot the Vines in January, and plant the young ones at the same time, the strong heat will cause the latter to come weak; and the same would result if they were planted in March, and the pot Vines started in January. As to the sorts, the first two are good but should be planted inside. For Golden Hamburgh we should substitute White Frontignan or Trévère Frontignan; and instead of White Nice, since being its recommendation, we should have Muscat Hamburgh grafted on the Black Hamburgh. The others will do well.

GARDEN PLANS (S. S. S.).—We never heard of the work. Such plans as those you refer to can only be obtained by applying to a professional garden designer.

STRAWBERRIES PLANTING (G. H. P.).—All your Strawberries would do best on a south aspect. The Black Prince is an early kind and so must have a south aspect. On a north aspect it will be ten to twenty days later than its usual time. Frogmore Late Pine, as a late sort, may be planted on the north aspect, and so may Oscar and La Constante; *Corolina superba*, however, is a tender sort and requires the best aspect possible, and the same holds true of Myatt's Improved Early.

CENTAUREA SANDIDISSIMA WINTERING (Hanley).—The Centaurea will not do in the same frame with *Calceolaria* cuttings. To winter it successfully it must be kept in a dry airy part of the greenhouse, and have no more water than is absolutely necessary to keep the foliage healthy. It is a half-hardy plant, the *Calceolaria* being all but hardy, and not so susceptible of moisture as the Centaurea.

NAME OF GERANIUM (W. H. B.).—The Geranium you describe is *Cybister*, one raised by the late Mr. Beaton. You ought to be able to obtain it from any florist.

NAMES OF FRUIT (H. W. C. L.).—1, Red Astrachan; 4, like White Costin; 5, 7, Kerry Pippin; 6, Downton.

NAMES OF PLANTS (Invicta).—*Vallota purpurea*. The bulb should be about an inch underground. It requires abundance of water during the summer. If in a pot this may then stand in a saucer of water. (F. F.).—1, *Cotoneaster officinarum*; 2, *Onoclea sensibilis*; 3, *Blechnum spicatum*; 4, *Polystichum aculeatum*. (J. S.).—1, *Polystichum angulare proliferum*, one of the several forms of this var.; 2, *Athyrium Filix-femina*; 3, *Polystichum aculeatum lobatum*; 4, *Polypodium vulgare*. (Marple).—1, *Impatiens noli-me-tangere*; 2, *Stachys palustris*; 3, *S. Betonica*; 4, *Galopalis tetralix*. (S. Cappleby).—*Polygonum chinensis*.

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

WANT OF POULTRY SHOWS IN THE SOUTH OF ENGLAND.

It has often been a source of wonder to me as a poultry-fancier, that while so many admirers and exhibitors of fowls live in the south of England, there exists in that district such a remarkable dearth of shows. The contrast in this respect between north and south is very striking, for while we find every little town, and many villages, in Yorkshire and Lancashire boasting its annual show, there are held within the same time not half a dozen exhibitions in the six or eight counties nearest to London. If all the poultry-fanciers lived in the north this would be natural enough; but as it is we find the names of southern exhibitors figuring even at Yorkshire shows. It is obvious enough that those who now send birds some two or three hundred miles for the chance of a prize would, *ceteris paribus*, prefer to support a show within reach of their homes, and whither they could not only send their birds with less risk and at less cost, but also could see their pets wearing their honours by visiting the show in person.

Some one may, perhaps, suggest Birmingham as the great central battle-field at which northern and southern exhibitors can meet on equal terms. But Birmingham after all is not London; and to reach the former place, for those, at least, who live in the southern and eastern counties, is a work of difficulty and expense. Moreover, to the Birmingham Show there are two serious objections: the one being the method of entering for that Show, by which, unless an exhibitor happens to have four pens to send, the sum paid for entrance is unduly high, being for two pens 26s., and for one pen 28s. 6d. The other objection consists in the want of due proportion between the numbers entered and the amount of prize money in some of the more recently introduced breeds.

To return to the south and its shows. I cannot but ask, Why was the Crystal Palace Show given up? In the heart of a suburban, and therefore almost inevitably of a poultry-fancying district, within easy range of the southern counties,

within still more easy reach of London, the Crystal Palace Show seemed under good management to combine all the elements of success. But it is gone, and to encourage its successors is chiefly my wish; and especially to hail with hope the proposed Show at Islington, and to recognise the liberality with which its schedule meets the requirements of the various breeds. It remains for us southern exhibitors to muster in force, and prove that a London show can be, as it ought to be, a success; for surely London is able to do what Halifax and Darlington have done for years.

Let me conclude by throwing out a suggestion, upon the merits of which I shall be glad to have your opinion and that of your correspondents—namely, why not have a poultry association for the home counties, holding an annual show within fifty miles of London at some important town, or, if thought better, in London itself? It might be well to meet one year in Kent, another in Essex, a third in Berkshire, and so on; but at all events to have one annual rallying of the southern poultry exhibitors at a really good show. Surely such an exhibition would draw together from its immediate vicinity a collection of birds inferior to none of those which have made the names of little towns in Yorkshire known to poultry-fanciers throughout the land.—**BRAHMA POOTRA.**

KEIGHLEY POULTRY SHOW.

THE twenty-second annual Exhibition of the Keighley Agricultural Society was held at Keighley on Friday, the 2nd inst. The streets of the town were decorated most lavishly, as usual at this annual festival; but the morning proved most unfavourable, heavy showers of rain falling at close intervals, completely drenching many of the fowls and Pigeons. Some exhibitors, more anxious about the comfort of their birds than that of themselves, put into requisition every available covering for their specimens; and, in several cases, by the help of a coat or a rug, a position was obtained in the prize list which, under other circumstances, would probably not have been attained; for it was a task of no ordinary difficulty for the Judges to satisfy themselves as to the merits of the contending pens. Towards midday, however, the weather cleared up, and the show-ground was thronged with visitors, the receipts at the entrance-gates being £360, or £50 more than last year.

In the first class a Silver Cup, value £5 5s., the gift of Mr. Manoh Rhodes, of Bradford, was offered for the best pen of *Game*, either old or young, such pen to contain a cock and two hens, or a cockerel and two pullets. In a severe competition the Cup was awarded to Mr. Elkanah Aykroyd, of Bradford, for a splendid pen of Duckwing chickens, in capital condition, the Judges considering them of most unusual excellence; very seldom, indeed, has such a perfect pen ever been exhibited, and Mr. Aykroyd has reason to be proud of his well-merited success. Miss Beldon exhibited a good pen of Brown Reds; and Mr. Fletcher also showed his Halifax Brown Red Cup cock, badly accompanied, the hens, in addition to not matching, being inferior in other respects. In *Cochins* Buffs were first in both classes, and Whites second. Beyond the prize birds the competition was only poor. *Spanish* were not numerous, but good. Mr. Cannan's commended pen, we think, should have occupied the position of his prize birds. The *Hamburgh* classes were well filled, and all contained really good birds; but many of the pens were seen to great disadvantage. *Silver Pheasants* and *Golden Pheasants* were excellent. *Polands* were good, more particularly the White-crested Blacks. *Dorkings* were only a small class, and were much out of condition. Mr. Kell took the first prize in old birds with a good pen. In *Red Game* capital Black Reds were first, and Brown Reds second, in both classes. In Any other variety, *Game Blacks* were first and second in adults; while in chickens only a single pen (*Duckwings*) was shown. The *Bantam* classes were well filled, Blacks being first in the adult class, and *Game* in that for chickens.

Ducks and *Geese* were fairly represented.

The *Pigeons* were numerous, and many good specimens were exhibited. In *Powders* Blues won all the prizes. In *Carrier* cocks a good Black took first; while the second prize was awarded to a Dun, two good Blacks being commended.

Carrier hens were not a very first-class lot. Almond and Mottled Tumblers were not particularly noticeable. In *Owls*, *Turbits*, *Jacobins*, and *Trumpeters* the prize pens were particularly good. *Barbs*, *Fantails*, *Dragons*, *Maggies*, and *Archangels* were average classes. In Any other variety the Halifax judgment was reversed, Mr. Yardley taking first with his wonderful *Satinettes*, *Blue Shields* being second.

The following is the prize list:—

GAME.—Silver Cup, E. Aykroyd, Bradford.
COCHIN-CHINA (Any colour).—First, Miss E. Beldon, Glaston (Buff). Second, W. Dawson, Hopton, Miffield (White). **CHICKENS**.—First, Miss E. Beldon (Buff). Second, W. Dawson (White). Commended, J. Jackson, Ingrow (Buff).
PARTRIDGE (Black).—First and Commended, W. Cannan, Bradford. Second, Miss E. Beldon. **CHICKENS**.—First, W. Cannan. Second, E. Brown, Sheffield.
CHITTREY.—First, T. Pickles, Ebury. Second, Miss E. Beldon.
CHICKENS.—First, R. Longbottom, Bingley. Second, D. Wilson, Sutton Fields.
PHEASANT (Golden).—First, J. Newton, Slades. Second, W. Cannan. Commended, J. Hardwick, Keighley. **CHICKENS**.—First, W. Driver, Morton Banks. Second, Miss E. Beldon.
HAMBURG (Golden-pencilled).—First, J. Gornall, Bradford. Second, S. Smith, Northowram. Commended, Miss E. Beldon. **CHICKENS**.—First, D. Wilson. Second, T. Pickles. Commended, F. S. Taylor, Manchester.
PHEASANT (Silver).—First and Second, Miss E. Beldon. Commended, W. Cannan. **CHICKENS**.—First, W. Cannan. Second, Miss E. Beldon. Commended, J. Green and J. Sudgen.
PHEASANT (Black).—First, Miss E. Beldon. Second, W. K. Duxbury, Leeds. **CHICKENS**.—First, W. Harker, Cottingham. Second, S. Briggs, Holywell Green. Commended, J. Hargreaves, Skipton.
POLAND (Golden or Silver Pheasant).—First, Miss E. Beldon (Silver). Second, W. K. Duxbury (Golden). **CHICKENS**.—First, D. Wilson. Second, W. Newholme, Bingley.
DORKING.—First, T. E. Kell, Wetherby. Second, Miss E. Beldon. **CHICKENS**.—First, E. Leach, Rochdale. Second, T. E. Kell.
GAME (Red).—First, Miss E. Beldon (Black Red). Second, H. Snowden Bradford. Commended, J. Hodgson, Bradford. **CHICKENS**.—First, T. Dyson, Halifax. Second, H. S. Dodds, Ovenden. Commended, Miss E. Beldon.
GAME (Any other variety).—First, J. Fletcher, Stone Clough (Black). Second, Miss E. Beldon (Black). **CHICKENS**.—First, H. Snowden.
POLAND (White-crested).—First, J. Smith, West Lane. Second, Miss E. Beldon. **CHICKENS**.—First, H. Carter, Holmfirth. Second, J. Smith.
BANTAMS (Black, White, or Game).—First, Miss E. Beldon. Second, C. Lister, Miffield. **CHICKENS**.—First, Miss E. Beldon (Game). Second, C. Lister (Black).
ANY OTHER DISTINCT BREED.—First, C. Walker, Halifax. Second, C. Lister. **CHICKENS**.—First, H. Lacy, Hebden Bridge. Second, Miss E. Beldon.
DUCKS (Rouen).—First, J. Nelson, Heaton Mersey. Second, S. Briggs.
DUCKS (Aylesbury).—First, F. M. Hindle, Haslingden. Second, E. Leach, Rochdale.
DUCKS (Black Indian).—First, J. R. Jessop, Hull. Second, J. G. Sadgen, Eastwood House.
DUCKLING.—First, J. Nelson. Second, E. Leach.
GESE.—First, E. Baxter, Eislack Hall. Second, W. K. Duxbury.
PIGEONS.—*Pouter or Cropper* (Cock).—First, E. Aykroyd. Second, Miss E. Beldon. (Hen).—First, J. Thompson, Bingley. Second, Miss E. Beldon.
Carrier (Cock).—First, A. Smith, Skipton. Second, J. Firth, jun., Dewsbury. Commended, H. Yardley, Birmingham; S. Briggs. (Hen).—First, J. Firth, jun. Second, Miss E. Beldon. **TUMBLERS** (Almond).—First, H. Yardley. Second, H. Snowden. (Balds, Beards, or Mottled).—First, H. Yardley. Second, S. Briggs. **Owls**.—First, Miss E. Beldon. Second, H. Yardley. **TURBITS**.—First, S. Briggs. Second, Miss E. Beldon. **JACOBINS**.—First, S. Briggs. Second, Miss E. Beldon. **FANTAILS**.—First, S. Briggs. Second, E. Horner, Leeds. **BARBS**.—First, J. Firth, jun. Second, S. Briggs. **DRAGONS**.—First, J. Baxandall, Sutton. Second, J. Rishworth, Eastburn. **TRUMPETERS**.—First, S. Briggs. Second, Miss E. Beldon. **MAGGIES**.—First, S. Briggs. Second, H. Yardley. **ARCHANGELS**.—First, Miss E. Beldon. Second, S. Briggs. **Any other Breed**.—First, H. Yardley. Second, S. Briggs.
KANARIS.—*Long-eared*.—First, S. Stell, Keighley. Second, E. Stead, Keighley. *Any other variety*.—First, R. Emmott, Keighley. Second, D. Lambert, Keighley.

The Judges were Mr. John Douglas, London; and Mr. J. W. Thompson, Southowram, Halifax.

POULTRY EXHIBITION OF THE SPARKENHOE FARMERS' CLUB.

Few societies can boast of so regular and permanent an amount of annual improvement as the Sparkenhoe Farmer's Club. It appears, from inquiries we made on the spot, that a considerable number of years back a few agriculturists of the district first instituted this Club, as a social means of discussing at its annual meetings any subject that might tend to the general interests of the farmer. Things thus progressed at first slowly, but, as the sequel proves, surely, to the production of one of the best local agricultural exhibitions of which we can boast. Ever ready to promote in every possible way the general benefit and pleasure of their fellow men, the Sparkenhoe Farmers' Club have from time to time added annually some one or other new feature to their customary gathering; and from being held every year

in some fresh locality, its novelty has never shown the most distant symptom of flagging, for, on the contrary, its popularity has invariably become more enlarged.

We cannot resist digressing for an instant to give a brief list of the present year's attractions. First, there was a very extensive and exceedingly good agricultural show of the usual character, with an extensive competition in butter, cheese, &c.; again, a floral and vegetable exhibition, and a public dinner to which ladies were invited—a capital hint, by-the-by, to all similar societies as regards assets; a balloon ascent by Mr. Jackson, the aeronaut of Derby, in his new balloon the "British Queen;" and lastly, though to the female visitors not the least enjoyable, a ball in the evening of very large proportions. To make certainty doubly sure, excursion trains from various districts became the subject of final arrangement, and all things promised a bumper. No amount of foresight, however, can insure the weather; and we are grieved, as faithful reporters, to say it was scarcely possible to conceive anything more unpropitious than was the whole day—rain almost without any cessation. Train after train brought its numerous sight-seers; certain it was, the best "bib and tucker" were not left recumbent in the wardrobes at home; and yet a fatality of wet seemed the irresistible order of the day. We speak positively: had the day proved as fine as the one following, some extra hundreds of pounds admission money would have been readily obtained. In fairness to all, we must say the railway excursion trains were not well managed. The companies had evidently concluded that the Birmingham musical festival, Warwick races, and another event or two of like character held simultaneously would so far contract the numbers of applicants, that very small trains would meet every exigence for transit to the Show. The result was the reverse. Great numbers applied for tickets, and seats could not be obtained; consequently the carriages were examined, until everywhere the annoyance was complained of. Most of the carriages were, in fact, adult nurseries.

Still, on getting to Ashby-de-la-Zouch, it was a matter of pleasure to see the good humour of the ladies generally, on the unexpected disarrangement of their toilette. The kind host and hostess of "The Royal Hotel," at Ashby, did all humanity could do to put all right again, and however the annoyance might grate within, it is certain it found a very meagre outflow in words. We again express, for the Committee's sake, our regret that fine weather did not give increase to the assets, for they fully deserved it. The poultry tent, as is customary on like occasions, was the great feature of attraction to the Show, and the originators of this meeting are evidently determined that this branch of its popularity shall continue. One of its chief features is the gift of a valuable silver cup to the best three pens of poultry—any varieties at the exhibitor's discretion—shown specially for this premium. This always induces the best of competition, and this year has fully maintained the evident inclination of the public to warmly support the views of its projectors. To show at this time of year three perfect pens from any one yard is a great difficulty, and so it now proved, for the contest for this silver cup was very close indeed, among about four of the many rivals. The best varieties shown were the Black Spanish, Grey Dorkings, Cochins, Golden-spangled Hamburgs, Turkeys, Geese, and Aylesbury Ducks. The "other varieties," both of fowls, and also of aquatic birds, were as much beyond the average.

The Pigeons were also as nice a collection as we have seen for long past, and the Rabbits were, undoubtedly, as rich in good specimens as any amateur could desire.

The tent devoted to the Poultry, Pigeons, and Rabbits, was airy, sufficiently large, and (not less usefully) well ventilated, whilst every possible attention was given to all the specimens confided to the manager's care.

BEST PAIR OF POULTRY.—Silver Cup, H. Yardley, Market Hall, Birmingham. Second, G. Bott, Sheepy Magna, Atherstone. Highly Commended, W. T. Everard, Barton Hill House, Leicester; J. Faulkner, Broth Farm, Burton-on-Trent; Right Hon. Viscountess Holmesdale, Linton Park, Staplehurst, Kent.

SPANISH.—First, Rt. Hon. Viscountess Holmesdale. Second, M. Brown, Ab-Kettleby, Melton Mowbray (Black). Highly Commended, M. Brown (Black); W. T. Everard. Commended, E. Morley, Spooote, Hinckley.

DORKING (Coloured).—First, Right Hon. Viscountess Holmesdale. Se-

cond, J. Faulkner. Highly Commended, Countess of Chesterfield, Broth, Burton-on-Trent; W. T. Everard. Commended R. Trussell, Woulda, Ashby-de-la-Zouch.

DORKING (White).—First, J. Faulkner. Second, W. T. Everard. Commended, T. H. Ashton, New House, Kingsbury, Tamworth.

COCHIN-CHINA.—First, Mrs. Wolferstan, Statfold Hall, Tamworth. Second, Right Hon. Viscountess Holmesdale. Highly Commended, M. Brown (White).

GAME (White, Piles, and Light Colours).—First, H. Warner, The Elms, Loughborough. Second, G. Bott. Commended, H. W. White, Museum Square, Leicester.

GAME (Red, and other Dark Colours).—First, W. Chamberlain, Deaford, Leicester. Second, W. T. Everard. Highly Commended, H. Warner; G. Bott.

HAMBURGH (Gold-spangled).—First, W. Draycott, Humberstone, Leicester. Second, H. E. Emberlin, Humberstone, Leicester.

HAMBURGH (Gold-pencilled).—First, T. H. Ashton. Second, W. Harrison, Bagworth Park, Leicester.

HAMBURGH (Silver-spangled).—First and Second, T. H. Ashton.

HAMBURGH (Silver-pencilled).—First, Right Hon. Viscountess Holmesdale. Second withheld.

FOR ANY OTHER DISTINCT BREED.—First and Second, J. Merdeth, Grendon, Atherstone (Silks and Andalusians). Highly Commended, W. Chamberlain (Ptarmigan).

PHEASANTS (Silver).—First, W. Harrison. Second, no competition.

DUCK (White Aylesbury).—First, H. E. Emberlin. Second, M. Brown. Highly Commended, H. E. Emberlin. Commended, H. Warner.

DUCKS (Any other variety).—First, C. B. Lowe, Sheepy Hall, Atherstone. Second, Mrs. Wolferstan. Highly Commended, R. Trussell. Commended, J. Choyce, Harris Bridge, Atherstone; W. Trussell, Ashby-de-la-Zouch; J. Johnson, Braunstone, Leicester.

GESE.—First, J. Faulkner. Second, Mrs. Wolferstan. Highly Commended, Mrs. M. E. Worthington, Temple Farm, Hinckley.

TURKEYS.—First, — Coxon, Freeford, Lichfield. Second, J. Johnson. Highly Commended, W. Harrison; J. Johnson. Commended, Mrs. M. E. Worthington.

GUINEA FOWLS.—First, W. Green, Normanton, Ashby-de-la-Zouch. Second, J. Johnson. Highly Commended, J. Johnson.

BANTAMS.—First, Right Hon. Viscountess Holmesdale. Second, H. E. Emberlin. Highly Commended and Commended, H. Warner.

FIZZONS.—Poulters or Croppers.—First, H. Yardley. Second, H. E. Emberlin.

CARRIERS.—First and Second, H. Yardley. **TUMBLERS.**—First and Second, H. Yardley. Highly Commended, W. Choyce, jun., Sibson, Atherstone.

FANFAITS.—First, H. Yardley. Second, W. Draycott. Highly Commended, W. Choyce, jun.

Any other distinct variety.—First and Second, H. Yardley (Satinettes and Spots). Highly Commended, W. Draycott (Red Turbites); W. Choyce, jun. (Swallows); H. E. Emberlin (Brunswick); J. Savidge (Archangels).

RABBITS.—Heaviest Weight.—First, J. Thompson, Ashby-de-la-Zouch. Second, G. Jones, Birmingham. Highly Commended, J. Thompson. Commended, G. Jones; W. Choyce, jun.

Length of Ear.—First and Second, J. Bead, Coventry. Highly Commended, G. Jones. Commended, J. Thompson; H. Warner; J. N. Dixon, Leicester.

Any other kind.—First, W. Chamberlain. Second, G. Jones. Highly Commended, H. Warner; G. Jones; W. Chamberlain; J. N. Dixon.

Mr. Edward Hewitt, of Eden Cottage, Sparkbrook, Birmingham, was the sole Judge.

BLACK GAME BANTAMS.

THE "WILTSHIRE RECTOR" wishes to know the pedigree of Black Bantams. This is a question which I have often asked and I could never obtain a satisfactory answer respecting them; but I can quite agree with his statement, that they are more game than Game.

Having kept Black Game Bantams about six years, I know something of their habits, which resemble those of wild fowl very much. Their habits are most interesting to watch, and can only be known to those who have most carefully attended to them.

I have four hens, a cock, and four chickens, which run along with my other fowls, consisting of Duckwing and Black Game. They agree remarkably well together, which is owing to their being reared in the same yard. In the spring the little hens will take themselves off for about a month, and return with their little families, and only until the hay grass is cut do I discover where they had got to. They generally prefer the shade of a large dock in the middle of the field. In intelligence there is no comparison between these and the ordinary Black Bantam, they being so very much more interesting. They are excellent winter layers, good sitters, and good mothers; their eggs in richness and flavour surpass those of any other fowls, and are of a dark cream colour.

These, in my opinion, are as interesting, profitable, and harmless little pets as can be kept.—J. R.

KENDAL POULTRY SHOW.—We are informed by Mr. G. C. Whitwell, that owing to leaving the neighbourhood he has been obliged to resign the secretaryship.

WORKING SUPERS ON COMMON HIVES.

FORMING STOCKS FROM CONDEMNED BEES.

I AM a young beginner, and am now in possession of two common straw hives; they are weighty, and seem to have plenty of honey. I want none of it this season, but I should like them in a hive on which I could use a super next year, and I beg to ask if they can be shifted into a hive of that kind this autumn, or at what time next spring? bearing in mind that I wish to increase my stock, and to work them without destroying a bee.

My neighbour has four stocks very heavy. He is going to destroy the bees in two of them to take their produce. If he gives me the bees would they survive the winter if driven into an empty hive, and I fed them well, the expense of which I should not mind?—W. H. P.

[Transferring bees and combs to new hives is far too difficult a job to be undertaken by a novice. You had better get a couple of pieces of deal three-quarters of an inch thick and 13 inches square, with a central aperture 3 inches in diameter, and clamped at each end to prevent warping. One of these should be fixed as a platform on the top of each hive by means of mortar in the spring, and an aperture cut with a sharp penknife in the crown of the hive corresponding with the hole in the wood. On this platform a super may be readily worked.]

Three or four stocks of condemned bees driven into one hive will fabricate and store combs if liberally fed in the autumn, and may very probably form a good stock next spring.]

COMB-PRUNING.

SINCE I have been a reader of your Journal the subject of comb-pruning has not been much alluded to. In "Bee-keeping for the Many," Payne says hives are to last from fifteen to twenty years, and in another place that he has had one last much longer; but whether he simply means the hive or the colony I am not quite sure, for in giving directions he says that only the outer combs are to be cut out. Taylor, also, in his directions states that combs that are filled with stale pollen or honey, or are mouldy, mildewed, &c., are to be removed.

My own idea of comb-pruning was, that by the occasional removal of combs as they became thickened by breeding, &c., a stock was to be kept in a state of perpetual youth and prosperity; but on thinking the matter over I am at a loss to know what is the really proper method to obtain such a desirable result, for I find it to be the rule that in four or five years a hive becomes worn out, and dies. I have often thought about it, but to-day it was again forcibly brought to my notice by seeing a hive which had swarmed and cast this year, dead, robbed, and empty of all but comb. Removal of the outer combs merely will never keep the hive perpetually new, for these are the combs that are most used by the bees for storing honey, and so are the last to be spoiled by breeding; and to remove a central comb in spring would be, most probably, to take away brood and what little honey had been left for the winter's store. Even to take such a comb out (supposing it to be a bar-hive), would be to chill the brood, at that time so precious. I have thought, how would it be to move, or transpose the combs before removal? for instance, to put the outer comb in the centre of the hive, and the central one in its place for a time before removal. But here again would be the danger of chilling any brood during the transposition. Would "A DEVONSHIRE BEE-KEEPER," and also any other of your bee-keeping readers, tell us their experience in this matter? It is this spoiling of combs which is fatal to Nutt's, and all similar methods of keeping bees.

I commenced bee-keeping in the summer of 1860, by buying one common cottage-hive, or rather a swarm hived into an old cottage-hive. I bought it of an old bee-keeper who lives near me. They have kept bees for at least two generations, if not more; and yet he brought me my swarm on the second day after swarming, and consequently the hive was much weakened by the loss of many bees, and I have only had one swarm from it, and that was last year. This year it did not swarm, as I suppose from the state of the combs. The first year I did not pay much attention to

my bees, although I was very fond of them; but since then, having had many losses of bought hives from the very bad years we have had, I have paid much attention to them, and have experimented a good deal with them in the shape of driving, chloroforming, uniting, fumigating, feeding, &c. In 1861 I had a Nutt's hive stocked for me by a friend with a good swarm in June. In 1862 it swarmed in spite of a bell-glass with a decoy comb, which it would not take to. That year was so bad, that its swarm, which came on the 23rd of June, was of no value, and died, or was chloroformed, and I had some trouble to keep the stock alive: however, it did live (which is more than I can say for four other stocks); but in 1863 it only filled the pavilion, and made a very slight piece of comb in one of the side boxes (no bell-glass). This year it nearly filled one of the end boxes; but when I wanted to remove it the queen obstinately refused to go into the pavilion, and after making several attempts to get the side box away, at last took the pavilion, and have left the queen and her subjects in the end box. I have drained 12 lbs. of honey from the pavilion. The comb was chiefly black; some of the honey also in it was candied, evidently last year's. There was no brood.

I shall be greatly obliged if you will bring the subject of comb-pruning before your readers, and have it thoroughly investigated. If experiments are required to test its value, I shall be glad to make one to try any that are likely to answer, and to send you the result. I have two of Taylor's bar-hives stocked, one with a swarm, last year, and another with my first swarm, this year. It has not been nearly so good a honey season with us this year as it was last.—C. F. G., *Kirton-in-Lindsey*.

P.S.—A full-grown drone, with beautiful pink eyes, was turned out of one of my this-year's swarms. Is this common?

BEES ROBBING—AUTUMNAL UNIONS.

CAN you, or any of your correspondents, inform me how to prevent bees robbing? as I observe my strongest hive, one that has never swarmed, is commencing to attack the other hives. They not only go to one, but try it on two or three. They seem to love plenty of honey, and I have also fed them with the bottle at night; but if anything this appears to make them more vigorous and lively. I have also narrowed the entrances to all the hives, so that they do not get in; but the other bees lose their lives and also the robbers in the defence.

Would you also say if there has been any plan hit upon for autumn joining without fighting? About three weeks since, after taking the queen away, I joined a swarm, giving part to two or three hives, without any fighting at night, but the other day I think they killed every one added to them.—A. B.

[If it be only one hive which offends in this manner, we should sentence it to transportation for a few weeks to a distance of not less than a mile and a half. When brought back at say the latter end of October, you will probably find the work of reformation complete.]

We believe the mode of effecting autumnal unions, described by Mr. Woodbury in page 523 of our fifth volume (new series), may generally be relied on to prevent fighting when the stocks to be united are of the same species.]

TRANSPORTING BEES.

I HAVE several times had occasion to send hives to a distance, either by carriers or by rail, and very often I have found that the honey ran out of the comb, and wasted 4 or 5 lbs. In packing I place the bottom of the hive on a circular piece of board and sew pieces of bag round it. Would you inform me, of some method of packing which would prevent the waste above mentioned?—G. C.

[The best mode of packing bees in common hives for transportation either by carrier or by rail, is to invert the hive in a box of suitable size (a tea-chest answers the purpose very well), confining the bees by a piece of cheese cloth securely tied over the hive, which should be kept steady by hay or other suitable material packed tightly round it, and a strip of wood 2 or 3 inches wide fixed across and nailed to the sides

of the box. This latter must be of sufficient depth to leave a space of an inch or more between the hive and the box-cover which, having had some good size holes made in it for ventilation, should be marked "This side up" and nailed down over all.]

UNITING QUEENS TO STOCKS.

THE following observations may, perhaps, interest some of your apiarian readers. Having successfully introduced a good many queens to sundry stocks without a single failure by following out the method indicated by "B. & W.," and three queens forwarded to apiarian correspondents having also been successfully united to stocks of black bees by pursuing the same course, I was almost inclined to look upon it as infallible. Subsequent experience has, however, led me to modify my opinion, and has compelled me to believe that the introduction of a strange queen is always attended with more or less risk.

In July last I presented a neighbouring bee-keeper with a Ligurian queen, and at the same time detailed to him the course to be pursued in introducing her to his stock of black bees. He gave an account of his proceedings as follows:—

"On Friday evening I received your present, and, after carefully perusing your instructions, set to work, delighted with my task. I soon caught my English queen, and placed her in reserve, allowing the hive to remain queenless till the morning; but five hours after capturing the queen I placed the Italian queen with her subjects over the hole in the top of the hive, covered with the perforated slide. On the following morning, having removed all the Italian workers, I cautiously withdrew the zinc slide, and allowed one bee to ascend; it at once attacked her majesty fiercely, and I removed it.

"Shortly afterwards I admitted another, which seemed better disposed; but in admitting a second, they both set upon her most savagely.

"I found it was of no use at present, so I allowed the queen to remain over the slide till my return in the evening, thinking they would be glad to accept her then. I proceeded as before. The first bee seemed kindly disposed, and my hopes at once revived; but in admitting another, imagine my grief and disappointment, when it instantly attacked her, and before I could kill it inserted its sting in her side, where it remained when I separated them. She lingered until morning. I then presented their old queen to them; she was at once recognised and joyfully welcomed.—G. L.

"I subsequently introduced another Italian queen to this same hive, who was properly received and accepted."

A similar misfortune, however, occurred in my own apiary. "A DEVONSHIRE BEE-KEEPER" kindly presented me with a pure Italian queen. I caught the monarch of one of my own stocks, and after the bees had been queenless for twenty-four hours, inverted the box containing the strange queen over the aperture in the top of the hive, which was covered with a piece of perforated zinc; this seemed to rather quiet the stock, who (not having any brood) were in a great state of agitation; and after they had remained in this state for about five hours I removed all the strange workers, and, placing the queen alone under a tumbler, carefully admitted one bee; it behaved well, a second also conducted itself with becoming decorum, but a third at once got upon the back of the queen, and almost instantly inflicted a mortal wound. A spare queen from one of my nucleus-boxes was accepted with but little trouble the following day.—J. E. B.

FOUL BROOD.

WHEN the "DEVONSHIRE BEE-KEEPER" published the doleful account of his disastrous experience of foul brood last year, I confess I thought he had drawn largely upon his imagination, and magnified a very trifling evil into one of vast dimensions in order to enliven the Journal with a little variety and astonish the apiarian world.

With Mr. Lowe I could not divine how a malady so malignant and infectious as had been described, could frequently, or only occasionally, play such havoc in our hives

without attracting the serious attention of our keenest English observers.

If Mr. Woodbury had been given to romancing, or if he had stood alone and no witness had appeared to confirm his testimony, it is probable that the evil which he had described would have been regarded by many people as entirely of his own creating. It was an evil which I had not previously seen or noticed, and I quite sympathised with the view of Mr. Lowe, when he ascribed its origin to "chill."

In this opinion I was somewhat confirmed on the 26th of October last, by finding on that day a hive, which I had previously set aside as my best stock for winter, in anything but a prosperous condition. It was a common cottage straw hive, had swarmed twice in the July previous, and contained at least two stones of honey. On turning it bottom upwards I found the bees reduced to a mere handful, and the whole brood-comb to the extent of 230 superficial square inches, sealed over. It having a very suspicious appearance I immediately cut out the comb, and on probing the cells found in every one which I pierced either dark dried matter, a putrid viscous liquid, or defunct rotting nymphs. The smell from the comb was peculiar. Here, then, I at once concluded, is the much-talked-of foul brood which occupies such a prominent position in the Journal.

Least there should be some mistake regarding it, I determined to send a specimen to Mr. Woodbury for his opinion. Accordingly I despatched, per post, a few inches of the affected comb in a box, and in reply to my inquiries received for answer in one letter, "I have not the least doubt of its containing foul brood;" and in another "I am bound to say differed not in the least (so far as I could discover), from that in my own apiary." This identification of an affection which I had found in a bell-shaped cottage-hive with the true foul-brood disease was just what I desiderated, for it occurred to me that I could prove to Mr. Woodbury's entire satisfaction that the evil now manifested was simply the result of "chill." The hive in question had not been moved from its stand for twelve months, and in the casts which it sent off on the 3rd and 15th of July, there was no disease whatever, as was proved by careful inspection; but when it threw its second swarm on the 15th, the population would be greatly reduced, whilst much of the brood would be still unhatched. At that time the days were warm, but the nights were cold, and on the night of the 18th, as is recorded in the Journal, there was 5° of frost—a temperature which we believe was never before registered in July. Here, then, I said to Mr. Woodbury, is a cause sufficient to account for all the evil which I have found, and scarcely a doubt on the subject remained when I reflected that infection had not been conveyed from the diseased parent to its offspring, which appeared to be in as healthy a condition as possible. Of this I made myself quite certain, as will appear from what I have to say regarding the first cast of the 3rd, which had been lodged in an eight-frame Huber hive. From this eldest offshoot of the diseased hive, which for brevity I shall designate Huber, four whole combs were cut out and the upper halves of two others. The bees were then driven out and a careful examination made of the two half and two whole combs left, but in no part of the hive was a single foul cell found, so I returned the bees to their almost emptied dwelling. Why should this hive be in such a healthy flourishing condition, when its parent was dwindling away under the fell power of a malignant and most infectious disease? This was a question, on the supposition that Mr. Woodbury had correctly described the evil, which I could not answer; and when Mr. Lowe put forth his able statement at the beginning of the year, I could not help thinking truth might yet be on his side, notwithstanding the vast mass of evidence which had been brought forward in support of Mr. Woodbury's views. But I was open to conviction, and I resolved to test the infectious character of the complaint which had been pronounced identical with Mr. Woodbury's foul brood.

For this purpose I selected for experiment a healthy cottage straw hive, and the Huber-hive just mentioned, containing only two half and two whole combs. These I fed most liberally with honey taken from the diseased hive, and by the 14th of April of this year the comparatively empty Huber contained brood in all stages, which so far as I could judge were quite healthy. On that day, also, it commenced

comb-building, and by the end of May the two half-combs that had been cut out were replaced by new ones, whilst the end of June saw the completion of four others in the place that had been vacant during winter.

The new combs were made in succession, and I daily witnessed through the glass the queen depositing eggs in them; but I was careful not to open the frames lest the brood should be chilled. The first circumstance that attracted my attention was the frequent disappearance of larvae from the cells, which, however, were not allowed to remain long empty. As soon as they were cleaned out they were again replenished with eggs by the queen. Their disappearances were distinctly detected in a comb adjoining the glass, which was made on the 18th of May. Still all seemed to progress favourably till the 26th of June, when I was a little surprised by seeing amongst the sealed brood several cells with flattened or perforated covers. On opening the glass and thrusting the point of my penknife into them, I found, in all of the above character, unmistakable foul brood, dark slimy matter, identical with what I had seen in the affected hive in October. But yet the bees continued to increase in numbers, and by the end of the first week of July, Huber was fully replenished with comb and so populous as to begin to cluster outside. Being the height of the clover honey harvest I daily expected it to swarm, but in this I was disappointed, and on the 23rd of July the desired result still seemed remote. I, therefore, removed the queen and a portion of the bees from it to a unicomb-hive for the purpose of observation, leaving the remainder to raise a new queen from the eggs and larvae, of which they had an abundant supply; but not even one queen could be reared. I therefore ejected the whole of the bees with a view to a careful inspection of all the combs. As I suspected, there were foul cells in every comb; even amongst the stored sealed honey there were sealed cells filled with putrid matter rendering the comb quite unfit for the table, and consequently showing how improper it would be to give the honey to healthy bees. The queen and the portion of bees which I removed to a unicomb for observation at once commenced their labours, and by July 30th a large portion of comb was furnished with eggs and larvae, which induced me to remove the queen that they might attempt to raise another. The foundations of two royal cells were laid, but only one succeeded, the larvae in the other perished on the eve of being sealed-up.

In this unicomb I had the opportunity of witnessing the disappearance of a few worker larvae, and now I imagine that the first visible symptoms of foul-brood disease in new comb is the finding empty cells, or cells with eggs newly deposited in them, interspersed among the recently sealed-up brood. The sealed brood in the unicomb generally matured; but on the 21st of August, three weeks from the period of the old queen's removal, and when the last of the young bees should have left their cells, a few cells still remained sealed. Some of them I opened-up and I found enclosed, as I had in the Huber, dark putrid matter. Others I left undisturbed to see what the bees would do with them, but to-day (September 2nd), these sealed cells have scarcely changed their appearance, the covers are not perforated, and so little are they flattened that simply looking at them I would say they contained healthy brood, did I not know it to be otherwise.

So much for Huber. Let us now return to the common cottage straw hive which I selected along with Huber for experiment, and which was also but not so liberally fed with honey taken from the first diseased hive. Unlike Huber it threw two swarms, one on July 4th, and another on the 12th. Shortly after sending out its last swarm I took it up and found, that out of seven queen cells that had been formed two had come to perfection, the others had proved abortive, or were still sealed and contained black-coloured putrid matter. There was foul brood in every comb, and as in Huber, there were also interspersed amongst the stored honey foul cells full of putridity. The idea presented itself to me that weather influences might possibly have something to do with the state in which I found my hives, seeing that June had been cold and wet, and that on the 30th and 31st of May there had been several degrees of frost. I was most unwilling to admit, if I could find another sufficient cause, that disease had been induced by feeding

with infected honey. To determine this point I broke up several cottage-hives corresponding to my experimental one, at one, two, and three miles distance, and which had also swarmed about the same time as it; but in none of them did I find a single foul cell.

Finally, on the 11th of August, I put a very strong swarm with a prolific queen into an empty skep, and fed it with the infected honey taken from Huber and the broken-up cottage-hive. On the 22nd I broke it up, and found what I now regard as a sure symptom of disease, empty cells amongst the recently sealed-up larvae, in which, of course, there had once been larvae, but which had died and been removed by the bees. When the fed diseased straw hive threw its first swarm on July 4th, the flowers were full of honey, and as every bee would be filled with honey taken directly from the flowers, no infection would be carried along with them. This was the case, there was not the vestige of disease in the first cast. But in the second cast I found the brood comb irregularly sealed, and, consequently, I destroyed it without waiting for the full development of the disease.

The conclusions, therefore, to which I have been constrained to come from these experiments and others not related are—1. Foul brood is a real disease and not caused by the brood getting chilled. 2. It is infectious.

Mr. Woodbury appears to have told the simple truth respecting it, and I verily believe that if I had not been careful to employ remedial measures, it would in a short time have assumed the same virulent and malignant type in my apiary that it did in his. The disease may exist from year to year in an apiary where natural swarming only is allowed, by feeding stocks with refuse honey from taken hives.

I shall be very glad to learn, whether Mr. Lowe has seen anything in his apiary this season to modify his former opinions on this subject.—R. S.

DOBNEY'S TEA GARDENS, ISLINGTON.

NEAR to the "Three Hats," was a place called "Dobney's Tea Gardens," kept by a Mrs. Ann Dobney, where there was a rival equestrian named Prince. These latter gardens occupied the ground between White Lion Street and Winchester Place, and were established as far back as 1728. In 1771 the house was shortly taken for a boarding-school, but it was soon changed to its original place of amusement; for in 1772 Daniel Wildman exhibited his bees here. This was the advertisement:—

"June 20, 1772.

"EXHIBITION OF BEES ON HORSEBACK.

"At the 'Jubilee Gardens,' Islington (late Dobney's) this and every evening until further notice (wet evenings excepted).

"The celebrated Mr. Daniel Wildman will exhibit several new and amazing experiments, never attempted by any man in this or any other kingdom before. The rider standing upright, one foot on the saddle and one on the neck, with a mark of bees on his head and face. He also rides standing upright on the saddle with the bridle in his mouth, and by firing a pistol makes one part of the bees march over the table, and the other part swarm in the air and return to their hive again, with other performances too tedious to insert. The doors open at six, to begin at a quarter before seven. Admittance: Box and gallery, 2s., the other seats, 1s."

OUR LETTER BOX.

CROOK'S IMPROVED INCUBATOR.—In answer to the inquiry made by a correspondent, we can now state that we have seen a very satisfactory testimonial relative to the hatching power of this apparatus.

ISLINGTON POULTRY SHOW—PIGEONS AT NEWCASTLE.—We have no less than six letters upon these subjects, and we feel that we shall act discreetly in not admitting any further discussion of the subjects. The Show we hope and believe will be successful, and we think similar Pigeon-judging will not occur.

WOODBURY FRAME-HIVES (C. F. G., *Kirtan-in-Lindsey*).—Working directions, with dimensions, were given in No. 56 of this Journal, and in the last edition of "Bee-keeping for the Many."

SQUIRREL SHEDDING ITS FUR (*A Country Clergyman*).—The bald appearance of your young squirrel is probably owing to its changing the coat, and it will most likely soon regain its fur. Bread and milk, and nuts are its best food.

PRESERVING GOUDS.—"I. B." wishes to know if these can be preserved as a sweetmeat and how. Can any of our readers afford us definite practical information on the subject?

WEEKLY CALENDAR.

Day of Month.	Day of Week.	SEPTEMBER 20—26, 1864.	Average Temperature near London.			Rain in last 37 years.	Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock after Sun.	Day of Year.
			Day.	Night.	Mean.								
20	Tu	Sun's declination 0° 54' N.	67.0	44.0	55.5	16	45 af 5	2 af 6	35 8	29 11	19	6 47	264
21	W	EMBER WEEK. ST. MATTHEW.	66.5	43.1	55.8	19	47 5	0 6	23 9	after.	20	7 8	265
22	Th	Acorns fall.	66.7	46.7	56.2	18	48 5	57 5	18 10	24 1	21	7 39	266
23	F	Peewits congregata.	69.1	46.4	57.7	17	50 5	56 5	17 11	9 2	22	7 50	267
24	S	Beech mast falls.	65.7	45.1	55.4	17	51 5	52 5	morn.	45 2	23	8 11	268
25	Sun	18 SUNDAY AFTER TRINITY.	65.7	44.0	59.8	18	53 5	50 5	18 0	14 3	24	8 31	269
26	M	Martins chiefly gone.	65.3	44.7	55.0	19	55 5	48 5	21 1	41 3	25	8 51	270

From observations taken near London during the last thirty-seven years, the average day temperature of the week is 66.6°, and its night temperature 45.0°. The greatest heat was 82° on the 25th, 1833; and the lowest cold, 26°, on the 26th, 1855. The greatest fall of rain was 1.68 inch.

BULBS.

(Continued from page 209.)

FORCING HYACINTHS IN POTS.



THE soil most suitable for the growth of the Hyacinth is loam from rotted turves that have lain in a heap in the full sun for twelve months, and been turned over twice. An equal quantity of fresh manure should be mixed with the turf at the time of laying up, and a bushel of soot sprinkled in at each turning. It is very distasteful to grubs and worms of all kinds; and unless the compost be free of these and other noxious grubs it is useless planting Hyacinths in it. If the compost is made as above it will answer well; but, if the loam is of a strong nature, one-sixth of sharp sand intermixed will much improve it, and prevent its binding.

Soils that form a close tenacious mass when pressed are unsuitable, and should, therefore, be avoided. If turfy loam is not to be had, soil of any moderately light description will do, adding an equal quantity of leaf mould if the soil is strong, or of hotbed manure if it is light. A liberal admixture of sand will improve the compost if it is deficient in that substance.

The compost, let it be what it may, should be chopped pretty fine with a spade, and passed through an inch riddle, which will take away any large sticks or stones, and yet leave the compost rough. Close sifting is not to be recommended, as it is apt to render the soil a mass of mud; besides, the roots do not then run freely through it.

Pots 6 inches in diameter, which, I believe, are the 32-size of the London potteries, but 24's of many provincial establishments, are the most suitable, though bulb-pots, now out of fashion, 4 inches in diameter and 8 inches deep, answer admirably. As the roots of the Hyacinth penetrate to the depth of a foot or more in the open garden, it is only reasonable to suppose that deep pots are preferable to those which are shallow. Six-inch pots, however, answer very well for single bulbs; but where three bulbs are placed in a pot the size should be proportionately larger. Three bulbs do very well in a seven or eight-inch pot, and in three's Hyacinths are more effective than when grown singly. Pots 4½ inches in diameter, which are the 32's of some potteries, will answer perfectly for the smaller kinds of bulbs; in fact any size double the diameter of the bulb will do.

The compost being in a moderately dry condition, so that it will not bind when pressed in the hand, place a

large crock over the hole in the pot, and on this half an inch of moss, cocoa-nut fibre, or pieces of charcoal, and on this again an inch of the rougher parts of the compost. We have now secured perfect drainage, and the pot must next be filled to the rim with the general compost. The bulb is cleared of offsets and loose scales, but only such as are decayed or injured, and, placing the bulb in the centre of the pot, press it into the soil so that the apex may be level with the rim of the pot, or just a little above the surface. Press the soil gently around the bulb, leaving a half-inch cavity below the rim of the pot for watering, and the soil should slope from the apex of the bulb to the sides of the pot, so that water will drain from, not to, the bulb. If three bulbs are inserted in a pot they must be equidistant from each other and treated like those potted singly.

After potting give a gentle watering, and having covered a level plot of ground on a north border or any other open and cool situation with coal ashes, so as to prevent worms entering the pots, stand these on it, and invert a 60-sized pot, or, what is better, a thumb-pot without a hole in it, over the crown of the bulb to keep it dry, as it is apt to rot when brought in contact with wet plunging materials. On the pots from 4 to 6 inches of coal ashes are placed, or old tan, or anything of a similar nature. In this position they are to remain for a time, but how long is a difficult question to answer. However, we will let them remain six weeks if potted prior to the 1st of October, and only a month if potted after that date. The object of thus plunging is to let the roots be well established before the foliage starts into growth; which is an important point in their cultivation. Plunging is by many considered of vast importance. I have no hesitation in stating from my own experience that it is of no value whatever. For some years I was in the habit of plunging the bulbs that the pot might be filled with roots before the foliage started; but I often found the foliage had started and was of a considerable length in a short time, and that, I think, was in a great measure due to the depth at which the bulbs were situated. I have found from 4 to 6 inches sufficient covering, for when placed at a greater depth the foliage quickly grows towards the light, and from the depth of soil through which it has to pass becomes blanched, and it is hopeless to expect a fine spike on a short stem after the foliage is drawn to the length of from 3 to 6 inches. I have had these bulbs plunged in ashes and covered with a foot or more of leaves, and I found such treatment, though highly lauded by some writers and practitioners, far from conducive to success. It is necessary, however, to place the pots somewhere, and I have found that putting them on coal ashes in a cold frame immediately after potting, keeping the lights drawn down at all times except when heavy rains occur, is quite equal to plunging them; for the idea that any bulb will root sooner because the pot is covered with several inches of ashes is absurd, and the foliage will not start one moment sooner because it is exposed to the influences of the atmosphere. I three years in succession divided the bulbs as received into

three parts, and placed one lot in a cold frame plunged to the rim in coal ashes, and protected from wet by the lights; but at other times, except in frost, exposed to the air day and night. The second lot were buried to the depth of a foot in ashes; and the third plunged in a like manner to the depth of from 4 to 6 inches. This was done on the 14th of September, and on the 1st of November I found those in the frame with the apex large and closely clasped by the sword-like leaves, which were green and about 1½ inch long, the roots matting round the pot. The bulbs under 6 inches of tan were in a similar condition, but not so well rooted as those from the frame, they were, however, in good condition; but those under 1 foot of ashes were grown to an extent of from 3 to 6 inches, and in many cases the apex was gone, no doubt from want of air and an excess of moisture. Both the first and third lot did well, but the first was the best, not according to my own judging, for my employer wanting to make a present of a dozen to a lady and selecting from the 150 then in flower, chose them without exception from it. More than this, I invited a florist, who sees things in a different light from a gardener, to inspect them, and out of the thirty-eight left of those placed in the frame he selected nine as the best, whilst out of one hundred composing the other two lots there were only three equal to the nine, although the sorts and quality of the bulbs were the same in each case.

The time of potting should be regulated by the period at which the bulbs are required to bloom. For early blooming they should be potted in the last week in August; but as they are rarely purchasable before the middle of September, a number should be potted at that time and placed on ashes in a suitable situation, as before directed, for from four to six weeks; but where a few are desired to bloom very early, the pots should be plunged to the rim in a gentle hot-bed, made by throwing up dung 2 feet high and covering it with ashes. This will produce a mild bottom heat of 70° or 75°, and excite a speedy root-action, and by exposing the surface to the air the bulbs will not be excited into top or leaf-growth. The heat of such a bed will only last for a fortnight or three weeks, at the expiry of which time the pot should be washed and freed from dirt, and placed on a shelf near the glass in the greenhouse where there is a free circulation of air, so that a strong growth may result. Here the Hyacinths are to remain until the first week in November, being duly supplied with water and the temperature kept above freezing. They may then be introduced into a house with a temperature ranging from 45° to 50° from fire heat, keeping them near the glass for three weeks, giving a little fresh air daily, and water of the same temperature as the house, so as to preserve the soil in a moist state never very wet nor very dry. By the third week in November they should be in a temperature of from 50° to 55° by fire heat, with a rise of 10° or 15° by day, keeping them near the glass as before, and giving air so as to encourage a stiff growth. In a fortnight the night temperature may be from 55° to 60°, which is the greatest forcing temperature I have found the Hyacinth succeed in, with a rise of 10° by day with fire heat, or 15° or 20° with sun. If due regard has been paid to keeping the plants near the glass, admitting fresh air, and watering, they will bloom finely a little before or by Christmas, when they may be removed to cooler quarters, yet the temperature to which they are taken should not be lower than 45°, or the plants will suffer in consequence.

Providing another batch of bulbs were potted at the same time, and put in some cold place to form roots, they should be removed to the greenhouse by the 1st of November, and placed on a top shelf near the glass, where they can have plenty of air (a great point in Hyacinth culture), by which means the crowns will swell gradually, and vigorous growth result. By the 1st of December the temperature must be increased to 50° by night, or the bulbs should be placed in that temperature, it being presumed that they have been kept for the last month in a heat of from 40° to 45°; and in a fortnight the heat may be raised to 55° at night, which will bring the plants into bloom by New Year's day.

Where a succession of Hyacinths is in request, another batch should be potted in the beginning of October, and afterwards every fortnight until the middle of December, the first three lots being plunged in ashes for a month, then kept a month in a greenhouse, and brought into flower by

an increase of heat, the first in the second week in January, the second in the beginning of February, and the third in the latter part of that month, to which those potted after them at intervals will afford a succession under ordinary greenhouse management, the late bulbs being retarded so as to bloom late.

For general purposes, however, two pottings are sufficient—viz., one in the second or third week in September of the early double and single varieties, and another in the first week in October, but not later than the second week; for though it is desirable not to plant them when a late bloom is wanted, yet as a rule, retarding the growth beyond its proper period has a deteriorating influence on the vigour of the bulb.

Presuming them to have been potted in the middle of September, they should be removed from their situation out of doors to a shelf near the glass in the greenhouse, and where they can have air on all occasions except in time of frost and rain, even then a little air is advantageous. If not required to bloom early let them have time; but if a few are desired early, the most forward may be placed in a temperature of 50°, and they will bloom in January. If not forced they will bloom in February, at which time and a fortnight prior to it, the minimum temperature should be 45°, and in this they bloom to perfection. When the truss, or rather the bells, begin to develop, every other watering may be of weak liquid manure, as the size of the bells will be improved in consequence, but after they are in full bloom the flowers will retain their beauty longer by watering with water only.

Those bulbs potted in the beginning of October should be treated in precisely the same manner as the first lot, with this difference, they must be protected from frost, and not removed into the greenhouse until the third week in November. These, if kept in an ordinary greenhouse, will bloom splendidly in March and April, the essentials to success being—1st. Placing the bulbs in a cool situation until the pots are filled with roots. 2nd. Keeping them near the glass, for the more light the greater is the elaboration of the food, and the more stiff is the foliage, the more compactly are the bells arranged, the stouter the stalk that supports them, and the brighter the colour of the flowers. 3rd. The size of the flowers, and the shortness or rather the stiffness of the spike depends on their having plenty of air on all favourable occasions. 4th. That they have no more heat than is sufficient to maintain the plants in a healthy, growing state, for the more naturally a plant is excited the more satisfactory are the results. 5th. A free open soil with plenty of vegetable matter. 6th. Perfect drainage, and being kept free from worms. 7th. A moist soil at all times, neither too wet nor too dry; but double the quantity of moisture may be afforded when the truss is nearly developed, every alternate watering being with liquid manure at the temperature of the house. 8th. When in bloom their beauty will last much longer if they are kept in an almost invariable temperature of 40° or 45° instead of a variable one, but they must be fully in flower or the colours will not be so bright, nor the flowers so fine, without a sufficiency of light and heat. 9th. The Hyacinth will bloom much more satisfactorily in a house from which frost is only excluded, than in one where more fire heat is employed.

HYACINTHS IN GLASSES AND BASKETS.

For growing in water the single kinds, because earlier and of stronger constitution than the double, are the best; but the double kinds have been and are satisfactorily grown in water. In choosing bulbs for placing in glasses let the main point be heaviness of bulb, and look well to the base of the bulb to make sure that it is sound; those showing signs of few or no offsets are to be preferred. October is the best month to place Hyacinths in water, which should be rain or pond water. The best glasses are those which are the most opaque; those known as Tye's are to be preferred, and triple glasses look better than single ones. Fill the glasses with water, and place the bulb therein so that the base of the bulb just touches the water, or, if anything, does not quite do so. Place the glasses in a dark cool place with a temperature of 40° or 45° for from four to six weeks, until the roots have grown to the extent of 4 inches; then gradually inure to light, and fill up the glasses with

water, which must be soft as before and well aired prior to using. The most suitable position is a cool room, as near the glass of the window as possible. It is not necessary to change the water: it may be kept pure by placing a few small pieces of charcoal in it, and the glass should be kept filled up as the plant takes the water up. If it become offensive, however, it should be changed. Sponging the leaves with rain water occasionally will free them of dust and contribute to their vigour. Fresh air, also, if it can be given without creating a draught, is of great value in securing stiff foliage; and light gives the colour to the flowers. Warm rooms are apt to draw the foliage and spike. Changes of temperature, as from a hot to a cold room or the reverse, are bad; and not less so is taking them from light to darkness or the contrary. After the roots are a few inches long the water may be lowered to half an inch from the base of the bulbs, as these occasionally decay when kept constantly wet. An airy situation is best, and if it be sunny all the better. The glass should be turned frequently, so that the foliage may not draw towards the light and become lop-sided, but be evenly balanced. Be very careful not to disturb the roots, and not to hurry in placing a support to the plant, only using one when it becomes necessary. If these hints be acted upon Hyacinths will bloom well in water, but they will not be as fine as those grown in pots. I was formerly of opinion that if a little liquid manure were added every morning to the water the bloom would be all the finer. I tried it, pouring every morning about six drops into each glass, and I thought the blooms were better than those which had none; but I very much question whether the liquid manure was really the cause. Perhaps some one will try it and communicate the result.

Hyacinths, with a variety of other early-flowering bulbs, are also grown in baskets, &c., in sand, moss, and a variety of other substances. The best material that I have found is cocoa-nut dust; it is light, holds a quantity of water, and when mixed with an equal portion of charcoal, reduced to the same degree of fineness as coarse-grained gunpowder, it answers very well. If a basket or bowl is to be used we first place a layer of rough charcoal at the bottom, and then fill to the rim within the size of the bulbs with cocoa-nut dust and charcoal, in equal parts, thoroughly incorporated, on this place the bulbs, and lastly cover them so that only the apex of the bulb is left above the surface. The material should be kept constantly moist; and after planting, the basket, or whatever it may be, should be placed in a dry, cool, dark place for a month, and then be fully exposed to the air and light, so that a vigorous growth may be encouraged. If desired, the surface may be covered with *Selaginella denticulata* by planting it between the Hyacinths.

If Hyacinths are planted in moss or sand lay about half an inch of charcoal at the bottom of the vessel, on which place the moss, pressing it firmly down; and on this plant the bulbs, allowing the same distance between each as the bulbs are in diameter. Cover these with moss, except the apex, give a good watering, and keep in a dark place for a month; then remove to a light, cool, airy window, and surface the vessel with green moss, which will give a cheerful appearance to the whole. Water overhead two or three times a-week through a fine rose, with well-aired soft water, to clear the leaves of dust and refresh both top and root. This watering should be discontinued after the plants come into bloom, when they should be watered at the root only. In other respects the treatment of Hyacinths in glasses filled with water, or planted in moss or sand, differs but little from that of bulbs grown in pots. G. ABBEY.

(To be continued.)

COCOA-NUT REFUSE FOR MULCHING RHODODENDRONS.

In the Number for August 23rd Mr. Robson has given some excellent instructions on the subject of watering. He says that all newly-planted surfaces should be covered, to prevent their cracking and hardening. There is nothing so good for this purpose as the cocoa-nut refuse. I was induced to try it from seeing it used in several gardens last year, and noticing the neat appearance it had. By

spreading it thickly over the flower-beds and round the fruit trees it prevents evaporation, and saves the labour of such frequent watering; another advantage is that the water is not wasted in running off the flower-beds on to the walks. I put some of this stuff round a plant that was nearly out of the ground, with its roots exposed, and some time afterwards I removed it, as the bed was too crowded, and was surprised to see the number of fine fibrous roots the plant had thrown out on the surface where this stuff had come in contact with the old ones. My neighbour's Rhododendrons are looking almost dead, whilst mine are in a vigorous healthy state. Both of us planted them in November; I mixed a quantity of the refuse with the earth, but he used none. I should think it a good plan to apply liquid manure by saturating this refuse with it, a little of which would be washed down to the roots at every watering.—H. E.

OUR METROPOLITAN FLOWER SHOWS.

Nothing is easier or more common than to attempt to run down by abuse when argument fails; and I therefore attach very little importance to what is said by those who, intrenched in their own fortifications, think to overwhelm me by choice epithets. But why I am a wolf in sheep's clothing I know not, except that I have used moderate and temperate language, and I have the satisfaction of knowing that my views are shared by some of the leading men in the horticultural world. I have had, since these articles were written, opportunities of meeting them—both those who are exhibitors, and those who are simply lovers of flowers—and have been told by one and all that my views are correct; and I can only say that, if they are not so, I shall be glad to see the question quietly and soberly argued, but shall refuse to believe that such matters can be set down by assumptions of wisdom, or sneers at the ignorance of others.

Can, then, nothing be done to improve the appearance of our flower shows? or are they to remain in their present state of formality? In considering this question I have been led to a few conclusions, which may, after all, be worth nothing, and to which great objections, and valid ones, may be made, but which I shall, nevertheless, set forth.

In the first place, all the three great metropolitan exhibitions might be vastly improved by the addition of more verdure, to relieve the mass of bright colouring which the most of exhibition flowers present; but, instead of offering prizes for Conifers and the like, I would propose that these be supplied by the societies themselves. All have appliances enough for this purpose; and this is precisely the plan adopted by the Royal Horticultural Society of Ireland, Mr. Moore, the intelligent Curator of the Glasnevin Gardens, always sending in some fine plants to ornament their shows. I would propose that these be grouped in the most effective manner before the exhibition plants are brought in, and that the flowers be staged or placed as these fine-foliaged plants demand. This, were taste displayed in the arrangement, would tend considerably to do away with the formalism that is complained of, but which, I think, very little strikes one at the Regent's Park.

Then I would certainly restrict the size of the pots in which the greenhouse plants are shown. This has been done with the softwooded exhibition plants; and I cannot understand that, with the skill and energy displayed by gardeners now-a-days, it is impossible to grow hardwooded plants in the same manner. I would not at once do away with the large plants, but I would offer prizes for greenhouse plants and Azaleas in certain sized pots, and do away with one of the present classes if needed. Great advantages would, I think, accrue from this to all concerned. The fact is, now, that no plant, however pretty, will be grown by those gardeners who exhibit unless it will bear twisting and torturing in all directions, and bloom at certain seasons; and then their size is so great that a few of them fill greenhouses, however numerous, and the proprietor loses all his pleasure in his garden for these enormous masses: hence it is that Vincas, Eriostemons, and such-like things make their appearance every year, and go the round of all the shows. But where are the Ixoras, Clerodendrons, and many other plants which used to be grown? Oh! they would not do—

i.e., they refused this nursing process. But then it is said, How can you supply their place at the exhibitions? I believe that a far larger number of exhibitors would come forward if they were not frightened by the recollection of the huge things they have to compete with, and then we should all gain by the greater variety of plants exhibited. One can now tolerably well name what plants will be shown before the day of exhibition comes; but were suitable plants required this would not be the case. Then, as to Azaleas, while one cannot but admire the skill displayed in producing such huge pyramids of bloom, I believe that half-specimen plants, allowed to grow more naturally, would be more pleasing to the general public. One remembers, in old Chiswick days, the plants shown by Mrs. Lawrence and others; they were not crinolines or hoops, and yet how beautiful they were! Therefore, I say, offer prizes for untrained greenhouse plants in ten-inch pots. The enormous pots for Pelargoniums, Fuchsias, and, I hope, Roses, are now for ever gone. Why not try what can be done with those plants which seem to be more intractable? There must, however, be one *sine qua non*—viz., that the size of the pots be unalterable—not to be changed at the whim and caprice of the governing powers; for these plants are not such as can be trifled with; and, as to training, I am aware that no plants can be grown without a certain amount of this, but I would consider that as little as possible should be intended by the term.

All cut flowers should be separated from those grown in pots. The plan of placing them in a long tent as adopted at the Regent's Park might be easily followed, and free access obtained by all who wished to see them. And might not something be done by offering prizes for herbaceous plants? There are many beautiful things in that class which we never see, but which are certain to please when well done. I remember with much pleasure in former days tastefully arranged baskets of these as shown at the Royal Horticultural Society's shows in Dublin.

I know of nothing more than in the present state of the matter can be done, and am convinced that these are sound views. Let us hope that something may yet be attempted to remedy defects where they exist; but let not the blundering and bad taste of one society be taken as a proof that reform is needed in all.—D., Deal.

PICEA AMABILIS NOT THRIVING.

About twelve years ago I purchased a *Picea amabilis*, which proved to be grafted near the collar. It is now about 7 feet high, and has been removed twice, the last time about four years ago. Last year it grew 9 inches, and this year it has grown about 3. During the dry weather the leader has dropped its leaves and withered. The stem has become nearly covered the whole length by something like the American blight, and which appears on the branches, and near the ends of them, and they are drooping. The ground is rocky below, and no water can remain near. The situation is quite open, and other plants have grown very well, though not fast.—J. G.

[We fear the fact of your tree being grafted has something to do with its want of success; added to which, most likely the situation is too dry, or the present season has been too much so for a plant not yet well established. Our own experience with this species is limited, but those to which it is allied mostly like a moister soil. The Silver Fir is found luxuriating on slopes and in dells where water is not far distant; and the finest Douglas Pine that we know is also in such a situation, and we know it fails to thrive in very dry places. We therefore think your tree requires a little more moisture than it has had this season, and probably another year it may do better. We have seen *Picea nobilis* thriving admirably by the side of water, and we believe *P. amabilis* was in the same neighbourhood. The former, however, also thrives well in the dry grounds at Linton. A specimen which had accidentally lost its leader many years ago remained several years without one; but it eventually produced a fresh leader, which has rushed up with all the symmetry and uprightness of a well-formed tree, and the growth for the last six years has averaged about 3 feet each year. The subsoil, though dry, is admirably adapted

to most forest trees. If, on the contrary, the subsoil of your garden is of an unfavourable character and the surface soil not deep, the result cannot be so satisfactory. The oozing out of white resin which you mention is a proof that something is wrong, but it is too late to remedy this season. Another year it would be better to supply the tree with water during the growing season if dry weather should prevail. We do not think any useful result will follow taking up and replanting unless you have reason to believe the soil bad and unsuitable. Another season the tree may do better.]

OLD AND NEW MELON SEED.

Do you consider old Melon seed to be preferable to new? If so, please state your reasons. Do you consider it more productive than new? If so, be so good as to state the reason why it should be so. A full explanation of this subject will much oblige—AN OLD SUBSCRIBER.

[Practically among good gardeners we consider there is little difference between the seeds of last year and seeds from three to six years old. Generally, when placed under similar circumstances the new seeds will produce the more vigorous plants, with the greater tendency to grow and make wood instead of setting the fruit quickly; whilst old seeds will yield plants of more sturdy growth, and be inclined to show and set fruit more quickly, because they are old, and it is a universal law in vegetable nature, that what ever tends to lessen vigour of growth will also tend to promote the production of seeds, the extra production of leaf-buds and fruit-buds being in an inverse ratio to each other—a fact which, thoroughly understood, has led to many improvements in modern gardening. Practically, however, the age of the seeds of a Melon, provided they vegetate freely, is of less importance, as extra vigour may be neutralised by frequent pinching and disbudding (for the Melon does not relish much cutting with the knife), and more dryness, especially at the surface of the soil, when the plants show bloom. If much cutting is resorted to, the plants when very vigorous will be apt to gangrene if the wounds are not well dried or daubed with charcoal and lime. The luxuriance, when disbudding is well attended to, will often cause the fruit to swell very rapidly after they are set.

Plants from old seeds will generally grow much more slowly at first, and have a tendency in similar circumstances to be of a more short-jointed growth, and will, as a general rule, give less trouble in disbudding and setting. Though, therefore, if we suit our practice to circumstances there will be little ultimate practical difference, we can see the wisdom of our old gardeners in carrying new Melon and Cucumber seeds in their pockets some time before sowing, and thus, by the heat of the body drying the seeds, placing them in much the same position as older seeds as respects their growth.

The chief advantages of seeds one or two years old, therefore, over new ones are the less vigorous growth and the greater tendency to show fruit early. If the seeds are too old, so as to vegetate very slowly, and vigour cannot be imparted by rich nourishment, or the plants are too delicate to receive it, we arrive at the extreme of weakness—just as new seeds, if treated with rich compost, are apt to give us the extreme of luxuriance. Whatever checks the luxuriant production of stems and roots will insure earlier maturity. In old seeds the drying consolidates the carbon, and the starchy matter becomes to a certain extent converted into albumen; and this is less easily changed by moisture and the oxygen of the air into a sugary liquid than a starchy substance in the seed. On the amount of the sugary matter which the germinating seed can obtain will depend, in a great measure, the vigour of the young plant.

The matter may be simplified if we recollect that as a seed ripens the sugar, gum, and albumen are changed into starch; and then when we wish that seed to germinate we must reverse the process, and by the chemical agencies brought naturally into operation get the starch and the albumen converted again into sugar. As a familiar instance, look at a fine Marrowfat Pea, soft, and sweet, and fit for the table—how sweet it is! Taste it when ripe, and tasteless starch along with nitrogenous matters are its chief components. Make that seed germinate, and you again obtain

the sweet moist taste of the half-ripened Pea. So much is this the case, that we have sometimes wondered that our epicures do not malt their old Peas to make them soft and sweet again for the table. Sow the Peas as soon as ripened, and they will soon germinate vigorously; keep them for a year or two, and they will germinate more slowly and more weakly. Dry them very much when thinly spread out to a bright spring sun, and the seeds of last autumn will sprout little more vigorously than older Peas. Dry them still more in sunlight, and the carbon may be so consolidated that the application of moisture will cause rotteness to ensue instead of germination. Dry fresh young Melon seeds especially in the sun for a fortnight, and you will get the slower germination that takes place with older seeds. Dry them still more, and the vital germ may be unable to find any sugar out of the consolidated starch and albumen. Old seeds, therefore, require more care at the germinating period. The moisture that would suit a fresh seed would at once in an old seed produce rotteness and decay. Old seeds thoroughly indurated should be allowed to absorb moisture gradually. We have sown two pots of Melon seeds from the same packet, and taken from the same Melon four years previously. In the one pot we used soil slightly damp, and gave no water until the seeds were swelling; and the other pot we watered a day after the seeds were sown. In the first case almost every seed grew, in the latter case not a single seedling.

We might go on and yet not explain the matter more. Without referring to man, we might instance the animals generally reared for human food. The breeders act on the same principle, though applying it differently. A quick build of beef, mutton, or pork is their object, and to secure this the animals are well fed from the commencement of their existence. The gardener would do the same with a Melon plant if his object were mere growth of plant, bulk of stems and leaves; but as early fruit is his object, he rather lessens excessive vigour of growth, and old or well dried seeds give him a weaker and sturdier young plant to start with.—R. FRASER.]

QUALIFICATIONS OF SCARLET GERANIUMS FOR BEDDING.

ACCORDING to the definitions laid down by your able correspondent Mr. Robson as to the qualifications desirable in a Scarlet Geranium for bedding, it would seem as if he held the old Tom Thumb to be a criterion of merit in a bedder of these varieties. In fact, every property he names is at present almost exclusively inherent in that variety.

As Mr. Robson invites criticism, I am happy to second what he says in relation to habit, but I must differ entirely from him in respect to foliage. A shining deep green leaf is possessed by few Geraniums, except Tom Thumb. Crystal Palace Scarlet is the nearest approach to it, but this has a white-eyed flower, with faint traces of a zone or horseshoe. Little David is another near approach to Mr. Robson's standard, and the same may be said of Punch, but the habit is not so close as desirable: hence it is only suitable for large beds. Harkaway is another near approach to the standard; but the nearest that I can conceive is Lamartine, which is a good flower and a first-class bedder, but lacks the deep scarlet of Tom Thumb. Petit Mont Rouge very nearly approaches the standard, it being quite as compact in habit, if not more so, than Tom Thumb, with large flowers of a deep scarlet. Lady Middleton and Le Titien have finely-formed flowers, and are of a fine compact habit; but the colours being rosy scarlet are undesirable; and the same may be said of Lord John Russell, though its scarlet is deeper than the rosy scarlet of the last two.

Except Christine, Rose Queen, and Roseum Compactum, which are rose-pink-flowered, there are really no Geraniums with plain foliage, without horseshoe zones, that are worthy of a place as bedding Geraniums. In fact, I think the horseshoe marking a decided improvement, for I have found it very often heighten the effect. There are few Geraniums which surpass Cottage Maid, and yet this is possessed of most bold zonate leaves, and has a bright white eye. Baron Hugel labours under the same disadvantage (I am adopting Mr. Robson's standard), and yet it is quite as effective as

any of the plain-leaved Geraniums. Harry Hieover is another which comes quite up to the point of merit in every respect, except the horseshoe foliage and the reddish flower-scapes. Princess of Prussia and Scarlet Perfection would be all that could be desired, but for their horseshoe markings. Cerise Unique, with slightly zonate leaves, is the best of the rosy scarlets, the nearest approach to it being Sheen Rival, the flowers of which are of a brilliant cerise scarlet. Black-heath Beauty, with faint yet distinctly zonate leaves and pinkish bluish flowers, is a good secondary-coloured Geranium, and one susceptible of great improvement, which I hope to see accomplished ere long. Lucien Tisserand, another boldly zonate-leaved kind with a large finely-formed bright scarlet flower, and Madame Rudersdorff, carmine salmon, margined with white, combining fine form with good habit, are also of the horseshoe section. In Whites, also, the best are found in the horseshoes. Again: take Stella, with which no Geranium can compare, and Baron Ricasoli; the latter shows the horseshoe marking more than any other Geranium, whilst in Stella it is indistinct, and the flower about as far from the standard of form as can be conceived. Greater part of those named would be discarded were Mr. Robson's standard adopted; and I should be loath to part with any of the horseshoe-leaved kinds for any improved plain-leaved variety of any colour. Except Tom Thumb, Crystal Palace Scarlet, Punch, Lady Rokeby (a near approach to the standard), among Scarlets, Christine, and Rose Queen, I would have nothing to do with any of the rest of the plain-leaved kinds.

As to the points themselves, I quite agree with those relating to habit; but differ with Mr. Robson in respect to foliage, thinking as I do that the horseshoe marking is a great advantage, enabling us to produce a greater variety of contrast, and to place Geraniums in proximity with some plants near which they would be inadmissible were the foliage not distinct as well as the flowers. In order to produce a pleasing effect it is necessary to study the contrasting of the foliage quite as much as the colours of the flowers. I cannot perceive that we should gain anything, but I am certain we would lose a great deal, by discarding dark-zoned Geraniums; and faint and reddish-zoned kinds, as Stella of the former, and Sheen Rival of the latter, owe much of their beauty and fitness for certain purposes through the marking of their foliage alone. For instance: it enables us to place plants nearly related in close proximity—may, immediate contact, with each other, and thus we attain effect with a trifling alteration of materials. Nothing could be more telling than a bed of Geraniums which I saw lately. The centre was Cottage Maid encircled with a broad band of Christine, edged with Golden Chain. It is in a great measure the horseshoe markings of Cottage Maid that make it so effective. I should be very sorry to lose it and Stella, and would part with all others rather than them. I have included Stella, which is an intermediate variety between the Zonale and Nosegay, though more of the latter than the former, and I think Mr. Robson does not include the Nosegays.

As to the flower, I do not think there is reasonable ground for the objection to a white eye; and as to their near approach to the properties of a good flower, the further are they then from possessing that rare property in a bedding plant—profusion of bloom. It is noticeable that whenever a florist takes a "starry" flower in hand he makes it not fit to be seen as a bedding plant.

With the other remarks of Mr. Robson I most cordially agree, and hope the subject will be thoroughly ventilated, and the merits of the varieties recorded in the pages of this Journal. It is a topic worthy of the attention of practical gardeners and those interested in this most popular of bedding plants.—G. ABBEY.

STRAWBERRIES, ROSES, AND PEACHES.

IT is in critical seasons that you find out what are the best Strawberries and Roses to have. I have received a letter from an amateur in Yorkshire, living in the fine vale of Mowbray, who confirms my recommendations given to him, and also to the public by the press. It is pleasing to me, who can have no private interest to serve, to find that

persons unconnected with trade indorse my recommendations.

As regards Strawberries, he says, after complaining of the drought—"Strawberries were soon over. Eliza (Rivers), Wonderful, Trollope's Victoria, Empress Eugénie, and Frogmore Late Pine held out, and perfected their fruit to the end of the season. Sir Harry, British Queen, Carolina Superba, La Constante, and others soon gave in and became prostrated. The five first mentioned appear to have wonderful constitutions, and are good croppers, of good flavour, and are right in either wet or dry weather—Eliza especially: it should have been named 'Punctuality,' because it never disappoints, whatever the weather may be."

Trollope's Victoria did not do here so well as usual, but the others did splendidly. I think President will supersede it. Mr. Taylor must add to the above five President, Royal Hautbois, Lord Clyde, and, as far as plant goes, Sir J. Paxton. I have fine plants, with bold crowns and strong foliage, of this "certificated novelty." Its fruit I have neither seen nor tasted; but Mr. Turner, whose word I can take, speaks very highly of it. It is a seedling of Mr. Bradley's.

North and south the nurserymen are short of runners of all kinds. All mine of every sort were in the ground and established by August the 9th. Spring-planted runners, worked plants, and fall plants are beautiful here. What they have cost me in water I cannot say; but *labor omnia vincit*.

As regards new Roses, Mr. Taylor writes:—"Maréchal de Serrurier is a trump. You must get it. Centre dark scarlet red, outer petals dark purple crimson; in the way of Madame Paul, but larger, fuller, and better. I fear many Roses will die this winter."

They ought not to die. I have never had a finer season. All mine were manured with decayed dung in July, and have been kept watered throughout the season. Once more, *labor omnia vincit*. I ran second in Class 1 at Kensington, September 6th, for twenty-four Roses (open). I cut for Weymouth, September the 9th, twenty-four beautiful trebles, and twelve beautiful singles. To-day (September 14th), I sent to the Bazaar at Dorchester twelve splendid singles (three yellows), and seventy-two Roses in trebles, and chiefly pure trebles. Five of these trebles were yellow Roses. I mention this to show the opponents of Manetti Roses what they can do when properly treated. I began with Souvenir de C. Montault on the 7th of May, and with the yellow Roses earlier, and I have had a profusion of noble Roses from that time to this. The walls are lined with splendid yellow Roses on the Manetti stock. I bought almost all of them of Mr. J. Keynes in the year 1860. They arrived November 17th in that severe year, and not one of them has died. I shall have good Roses till frost and snow set in.

As regards Peaches, the crop of my three trees has been 560. I sent to-day the last thirteen to the Bazaar, and they were the finest Peaches there.

To show the use of affixing your name and place of residence to an article, so as to afford readers an opportunity of verifying the truth of statements, and also of examining the management recommended, on Saturday, September 10th, Mr. Willett, of Portland Place, Brighton, honoured me with a visit to review these trees. He inspected them, saw such fruit as was left, and greatly admired the fruit, foliage, wood, and general management. I showed him the *cruel tenus*, and also how I intended to manage them after the wasp-defying hexagon was removed. I also showed him the Roses and the Strawberry plants. He told me that he could grow nothing at Brighton without glass on account of the furious winds; that he only grew forced Strawberries; that Peach trees planted out did better with him under glass than those in pots. I was very glad that he came and saw the truth of my statements. Since he has left I have given the trees their autumn management. I would rather persons came to see, than ask me to answer the stupid question, "Do Peach trees degenerate?" I will answer, however, the question, and say, They do degenerate, but, were they properly managed, they would not do so; for there is no tree here so easily managed, nor any trees in the garden, or beyond its limits, with such healthy and beautiful foliage.—W. F. RADCLIFFE, *Bushton*.

P.S.—My servant has returned from Dorchester, conveying the thanks of the lady stall-keepers, and their especial admiration of the Roses and Peaches.

ROYAL HORTICULTURAL SOCIETY.

SEPTEMBER 6TH.

FLORAL COMMITTEE.—A Sub-Committee was summoned to examine seedling Dahlias, &c., on the occasion of the autumn or cut-flower Exhibition, which proved, as might have been expected, a most signal failure. Had not seedling Dahlias, &c., been sent, the exhibitors at this Show would not have numbered ten. Messrs. Henderson, Pine Apple Place, exhibited *Gardenia florida variegata*, which had previously received a first-class certificate; also *Aralia Sieboldi variegata*, which had been commended in 1861; and *Allamanda Hendersoni*, a very fine seedling with dark green foliage, and large, bright yellow flowers of great substance, a decidedly good variety and distinct—to this a first-class certificate was awarded. Mr. Bull, Chelsea, sent *Dendrobium formosum giganteum*, a large white flower, the lip strongly marked with a broad yellow band, forming a very conspicuous feature. A first-class certificate was awarded to it. Mr. G. Smith, Hornsey Road, sent seedling *Pelargonium Prime Minister*, bright scarlet, white eye, zonate foliage, fine-formed flower of good substance, but not in condition for an award; also *Pelargonium Princess*, a pale rosy pink flower, with zonate foliage. Mr. Salter, Hammersmith, sent *Pelargonium Beauté de Suresnes*, one of the Christine section, with beautifully-formed flowers, large truss of deep rose, the lower part of the upper petals white; one of the finest flowers of its class—first-class certificate. From Mr. Stalker came *Verbena Gipsy Queen*, and *Verbena Minerva*, the latter the colour of *Prima Donna*, with a good truss—second-class certificate.

Messrs. Downie, Laird, & Laing sent cut flowers of six seedling Pentstemons. Mrs. Moore, a good-formed flower, rosy purple, with distinct white throat mottled with brown, received a first-class certificate; and Mrs. E. Clarke, pale red, with white throat deeply marked, a second-class certificate. Mr. Norford, Brompton, had *Verbena Purple Prince*, small compact truss, free-flowering, useful for bedding purposes—commended. Mr. Keynes, Salisbury, sent twelve cut specimens of seedling Verbenas, none of them sufficiently distinct from other named varieties.

Mr. Keynes sent, also, several seedling Dahlias, of which George Wheeler, fine form, pale lilac, back of the petals of a deeper shade of the same colour, had a first-class certificate. Champion, fine form, rosy purple shaded with maroon, had a similar award. Second-class certificates were given for Queen of Primroses, a large bright flower rather inclined to be coarse; and Queen of Sports, white striped with rosy crimson. The following seedlings were not awarded certificates—Tippy, Bob, President, Bird of Passage, Hercules, Matilda, Mrs. Reid, Hon. Mrs. Fox Strangways, and Annie Weeks. From Mr. Legge, Edmonton, came seven seedling Dahlias, but none of them of any particular merit—viz., Victory, Mr. Golding, Marvellous, Glory, Ellen, Crimson Perfection, and Excellent. Mr. Collis, Bethnal Green, had seedling Dahlias Annie and Princess Alexandra, the latter a promising Fancy variety, bright yellow ground, distinctly marked with crimson stripes.

TODMORDEN BOTANICAL SOCIETY.

MEETING SEPTEMBER 5TH.

THE President in the chair. The attendance was unusually numerous.

Mr. Hobson exhibited admirable specimens, in the dried state, of the following North-American plants, all charmingly in flower—viz., *Dentaria laciniata*, *Anemone thalictroides*, *Arum triphyllum*, *Viola ochroleuca*, *V. blanda*, *V. palmata*, *V. pedata*, *Erythronium americanum*, *Orchis spectabilis*, *Cypripedium humile*, and *Sarracenia purpurea*; also the rare *Polypodium incanum*. The above were kindly presented by Mr. Hobson in augmentation of the Society's herbarium. Mr. Hobson also gave interesting details touching North-American botany. He referred to a new *Spleenwort* lately discovered by himself in Pennsylvania, and, as yet, unnamed.

Specimens were exhibited from Vancouver's Island of the under-named Filices—viz., *Cheilanthes* (Cassebeera) *farinosa*, *Botrychium virginicum*, *Polystichum acrostichoides*, *Adiantum pedatum*, *Allosorus crispus* (evidently identical with the British type), and a very peculiar form of *Polypodium vulgare*, with the tips of some of the pinnae terminating in a horn-like process, extremely curious, the horn projecting from a kind of pocket or sheath. The plant, if permanent in its peculiarities, might well be named *Polypodium vulgare cornutum*. Of this oddity only one example had been gathered in the island. The *Cheilanthes* above-named, as might be expected, is described as rare. Amongst other Cryptogams exhibited were unusually large examples of *Asplenium lanceolatum*, gathered by Mr. A. Stansfield, jun., on the coast of Marioneth.

PACKING ORCHIDS FOR IMPORTATION.

ON perusal of your Number for September 6th, I observe information is solicited on the mode of packing Orchids for importation. I therefore venture to give a few hints from my experience.

As Wardian cases are not procurable wooden boxes must be used; packing in hampers of any kind would be useless. First, then, gather moss, not sphagnum or water moss, and thoroughly dry it, so as to be like hay, because it will then absorb any superfluous moisture from the plants, and likewise give out all that is necessary for their requirements. It must be borne in mind that the foliage and roots of the plants must be dry before packing. In doing this be careful not to fix the tops nearly so firmly as the roots, and both ought to be only moderately firm. For every layer of plants insert a few sticks to keep them in place. Now, as to the situation in the vessel: this must be between decks, in order to keep them at as equable a temperature as possible, but care must be exercised not to place them near any fire, or steam boiler. They will not need any airing on their passage, as once admit sea air to your plants, and destruction will follow. If practicable choose an overland route in preference to the long sea voyage. I condemn the use of charcoal, sawdust, cotton, bran, and the like, for packing, the absorbent properties of which would inevitably destroy the greater part of the Orchids before arrival, these materials having no power to give any portion out of what they take in. Having unpacked many cases in which these materials were used, I found such to be the result.

The above statements, based on my own practical experience, I tender with pleasure.

In a future paper (if agreeable), I will give a few hints on the importation of *Phalaenopsis*, *Sophranitis*, and *Burlingtonia*.—A LOVER OF ORCHIDS.

[Such a communication will be very agreeable.—Eds.]

I AM much obliged by the courtesy of "W. B. d'A." Mr. Williams's Manual I had already consulted, for I possess both editions, as I do Appleby's, which in some respects I value even more, though both are excellent. I have myself repeatedly imported Orchids from Brazil, and from the West Indies. My correspondents in these cases, acting under my directions, stuffed the plants in, when at rest, the former in barrels with no packing material, but about one-third of the whole bulk of small charcoal poured in over the plant; the latter in a large box with the long twining roots of a Cactus (dry) put between the Orchids for dunnage.

The Brazilian consignments turned out in capital condition, dirty enough of course; but that I quickly got rid of by washing the plants in tepid water before I spread them on dry moss in the shade, or hung up those that were affixed to blocks. I lost scarcely a plant.

The West Indian lot also came over in beautiful order and prospered well with one or two exceptions. I am inclined, however, to prefer charcoal dust, especially if the Orchids are not perfectly at rest when packed, because of its absorbent and antiseptic properties. Your correspondent is in error in supposing it "heating" and "causing to sweat and rot." Its action is quite in the opposite direction.

But I have had no experience in importing from so distant a region as India; and since the great expense of Wardian cases and of the overland route is out of the question for

me, I wished to know how the evergreen leafy-stemmed kinds—as *Vandas*, *Saccolabiums*, &c., would bear being packed in closed cases and sent round the Cape.

Mr. Williams's information is most valuable, but he does not tell us whether the *Phalaenopsis*, &c., that he imported from Manila (Manual, page 9, second edition), were in Wardian or in closed cases. He presently comes to speak of a close box in which *Phalaenopsis* was packed in dry bark, "a bad material" as he says, and as I should certainly suppose; but I do not gather whether these plants were destroyed or only retarded. Then he reports well of "plants" from India packed in dry soft shavings; but he does not say that these were of the *Vandoid* type, though I presume they were. Finally, he gives no hint by what route all these consignments came.

May I not hope to receive a considerable per-centage safe if my friend be careful to pack when thoroughly at rest, to fasten the heavier plants to the bottom, sides, and lid of the case, to stuff in very dry elastic moss with the lighter plants in the centre, and to throw in a peck or two of charcoal dust over all?

I may add, that I have received repeated consignments of terrestrial Orchids from South Africa, sent by the same friend, and packed in loose charcoal. Many of these have arrived alive, though the majority have been dead—a result not to be wondered at, when we consider that they were all *Ophrydæ* with soft viscid tubers, diminutive in size, and taken up just when my friend happened to meet with them.

If any of your correspondents who have actually imported oriental Orchids would kindly give the result of their experience, mentioning in detail the form of package, the packing material, and the route, it might be valuable to many an enterprising—ORCHIDOPHILUS.

MR. BEATON'S BEDDING GERANIUMS.

WE announced some time ago that the late Mr. Beaton's entire stock of seedling Geraniums had become the property of Mr. William Paul, of Waltham Cross. Since then many of these have bloomed, and during the past season of exhibitions some of the best of them have been seen at the principal metropolitan shows, where they have invariably attracted a large amount of attention and admiration, and notices of them have appeared in our own pages and those of our contemporaries. It is with pleasure that we now announce that Mr. William Paul will be prepared to send out, in the last week of October, nine of the most beautiful varieties that have already bloomed, varieties of which we truly say the like have never been obtained; possessing, as they do, not only novelty, but singular beauty of colour and remarkable profusion of bloom, such as have never yet been met with in the class of "Bedding Geraniums." At page 4 of our present volume, will be found some notes on six of the varieties shown by Mr. Paul at the Royal Horticultural Society's Show. From what we have seen of them subsequently, we can not only indorse the statements there made, but we can say that we have seen them in much greater beauty than they have been when shown at any of the great exhibitions.

A FEW DAYS AT MARLBOROUGH.

THERE are three oft-quoted Latin words which, being translated into plain English, mean "to enjoy one's leisure with dignity." Well, I happened to have some leisure; but as to the dignity of the thing, why, I am lying flat upon my stomach, having the stump of a sawn-off Oak tree for my writing-desk, with magnificent Ferns gracefully fanning my head and shading me from the noonday sun; and I am taking pencil notes on the back of a printed bill, which describes a cottage-garden show that was to take place in the grounds adjoining the ruins of old Savernake Lodge, Savernake Forest, on the 1st of August. When I write for the public I object to inform them whether I am busy or ill, circumstances for which I cannot deceive myself into the belief that they would care one fig about; but where to pitch my tent for a few days to try and relieve myself of horrid neuralgic pains in the head and face, that was the

question. Circumstances quartered me in the quaint old town of Marlborough in Wiltshire. Rambles about the downs, and long walks amongst the splendid scenery of Savernake Forest, soon worked health-giving wonders upon me. I would advise persons so afflicted, or indeed in any way afflicted, to take the train to Marlborough, to try a few days there; and if the country should have the same effect upon them as it had upon me, why I am compensated for penning this, and doubtless they would feel grateful for the recommendation.

Savernake House, the seat of the Marquis of Ailesbury, is about four miles distant from Marlborough. To enjoy a rich treat in woodland I would recommend the pedestrian to leave Marlborough by the Salisbury road, to branch off by the turnpike-gate up into the forest, where by observing the most beaten track between varying avenues, open dells, spreading Oaks and Beech, and Ferns and Mosses many, one is lured on and on till the "King" and "Queen" Oaks of the forest are reached. The former has a diameter of rotten trunk measuring 8 feet according to my walking-stick, and the monarch is otherwise shorn of his strength and beauty, having only one arm left, poised in mid air, and, as a notice beneath it specifies, "dangerous." Her majesty reigns in the vicinity hale and hearty, and looking as if she might reign for a thousand years or more. Under the shadow of her branches is a favourite resort for gipsy parties—in fact, there was a small one ensconced there at the time of my visit, which prevented me from taking any measurements. Nevertheless, did any of my readers after some miles of walking on a sultry day, and feeling very thirsty, ever come suddenly near good people with tempting viands spread out and bottles not drawn dry regaling themselves? Torments of Tantalus! I left, and they made no sign.

Midway between these royal Oaks the late Marquis of Ailesbury caused a large thatched shed to be erected. I believe they call it the Chinese Umbrella, from its being a copy of an erection of the sort his lordship saw in the "Flowery Land," for the accommodation of parties in the event of a storm. It will shelter a large number of people. "It is about to be new thatched," said an old man whose life's work is nearly done, and who is employed by the Marquis to hobble about with barrow and broom to sweep up the leaves and other debris resulting from gatherings of convivial people. I expressed to him that it was very kind of the Marquis of Ailesbury to allow people to range about and to enjoy themselves uninterruptedly upon his property, and for him to anticipate their wants so considerably. The old man said, "My lordship is a good gentleman, and likes people to come and view his property;" and from what I learnt from numerous sources and in many ways his lordship is a "good gentleman."

Now, proceeding onwards from the Queen Oak, some fifteen minutes walking would introduce one to the monument, erected by one marquis in gratitude to another; as also to commemorate a thanksgiving for the recovery of King George III. from an affliction well known to history. From the monument a delightful though long walk would introduce one to the mansion, which can be seen in the distance; but necessity, not choice, would only incline me, a forest-loving pedestrian, to proceed farther that way; so, looking forward to the pleasure of viewing the gardens by another route another day, I returned into the bosom of the forest, and gave myself up entirely to the admiration of its beauties, meanwhile taking care to give the pic-nickers a wide berth.

In some parts of the forest the Holly trees are very fine, and many of them have a remarkable propensity for the Oaks, springing, as they do, with their bases literally growing out of each other, and again, above, leaning and weaving themselves into each other's arms in a most affectionate manner. One of these decorations of our Christmastide I computed to be quite 60 feet high, with a clear stem 8 feet high, 3 feet in diameter, and having a spread of branches 18 yards across. I also noticed another very fine Oak tree, though not of the same variety as the King and Queen Oaks—nor can I say exactly to what species of *Quercus* it does belong—but it tempted me to bring it to book. Computing by my walking-stick, I give its trunk at nearly 8 feet in diameter, branching off at 12 feet from the ground into

three fine trees. My step gave it a spread of branches at right angles of 37 yards one way by 38 the other, and it has a tolerably regular receding top, I should imagine quite 100 feet high to its apex. I took a special walk to admire this fine specimen of Nature's handiwork. I ought also to mention that the lower branches have been cared for by some other lover of fine trees, by being propped up with stout forked posts, giving a Banyan appearance to it in the distance. These supports are unfortunately necessary, as symptoms of splitting are recognisable in the lower branches; and, to whomsoever the remark may apply, let me advise their speedy renewal, as the present supports are fast becoming rotten and useless. In a great measure the Oak and Beech trees are gracefully lightened up with a good complement of Birch, and a sprinkling of Sweet Chestnut. Many ancient Hawthorns, too, felicitously introduce themselves; and, when in blossom in the spring must appear like unto the driven snow laden with sweet incense.

For those who would like to enjoy good bracing constitutional about the downs, it is a good plan to start by the Wootton Bassett road, past the new cemetery, over the common, and on to Rockley House, the grounds around which, and extensive clumps about the downs, were planted by the late Hon. General St. John, to whom, some years ago, this property belonged; the plantations, however, are past their best, from want of timely thinning. From Rockley strike on to the turf for any number of miles that one's legs can carry one; or, instead of the Wootton Bassett road, on arriving at the common take the Swindon road to the right, and, after a mile or two's walk, a fine, open, mild, though breezy country will be reached.

I now come to recommend a drive after the morning's walking, and host Carter's pony carriage became an admirable means to that end. We started by the London road; a mile's ride introduced us to the forest by the iron gate, and here an avenue of Beech opened to us not soon to be forgotten. I believe it extends three miles in length, and it is magnificent. The ground undulates in some parts of its length, which serves to animate the effect, as in rising and descending the trees seem literally to recede with a strange weird-like rolling movement, or gather themselves up, according to the line of vision in which the beholder views them. The clean pillar-like boles of the trees, and the gothic arch formed by the branches give an immense cathedral-nave-like aspect, whilst the light graceful foliage, to which the play of the air and light give animation, was a living picture of Nature worth coming many miles to see. At a break in its continuity at a spot called the Eight-walk Avenue, where drives branch off in so many directions through the forest from a pivot formed in a new plantation of Firs, we turned off, passing as we drove along the ruins of Savernake Lodge, which was unfortunately burnt down a few years since. The forest becomes more park-like now as we wend our way to the farmstead, steam-saw mills, and workshops, in order to hunt-up the clerk of the new district church of St. Katharine, and that accomplished the beautiful new structure soon became introduced to us. Truly a pleasant spot. A ha-ha with wall protects the churchyard, which is entered by handsome wrought-iron gates supported upon flint and stone pillars, of which materials the church is built in the shape of a cross. On entering the porch a superscription over the door leading into the church informs the reader, that "The Church of St. Katharine, Dedicated to the Honour and Glory of God, was erected by Mary Caroline Herbert, Wife of George William Frederick, Marquis of Ailesbury, A.D., 1861, in Memory of Her Mother, Katharine Woronzow, Countess of Pembroke and Montgomery, through whose Liberality she was Enabled to Build it." The style of the building is gothic, but to give a just, technical, architectural description of the structure with its details would be beyond my acquirements, and hardly appropriate even if I could do so for this Journal. Yet we stayed so long at the church that it was questioned whether it would be quite right to intrude on Mr. Johnson after six o'clock to visit the gardens; but I had formerly exhibited productions at our show at Woodstock side by side with him, therefore I claimed a sort of acquaintanceship, and from what I knew of him I felt sure we should meet with a kind reception be it late or early; therefore, a pleasant drive of a few minutes introduced us to his wood-embowered cottage, but unfortunately

not to find him at home. He was gone with the clergyman on a tour of inspection to the cottagers' gardens, in order to know to whom to award the prizes at the forthcoming show, for those allotments, &c., best cultivated. I gave our names to the damsel who came to the door, who, I suppose, reading disappointment depicted on our countenances said, "If we wanted to see the gardens the young men in the 'bothy' would show them to us, if we first went here, then there, &c. It would be rather difficult to find as their rooms in the garden were being rebuilt, and they had to make shift for the present." We soon found "the bothy," explained the wherefore of our appearance there, and became upon visiting terms at once with one of the young men, who, if our conscience would have allowed him, would have opened every pit, and unlocked every vinery for our inspection.

"The bothy" was on the verge of the frame-ground, in which were seven or eight ranges of long pits containing Melons, Pines, and ornamental stove and greenhouse plants. A few glimpses sufficed to show that the occupants were in perfect order and receiving first-rate cultivation; but we could not resist a more close scrutiny of the fine-foliaged stove plants—a good collection and perfectly healthy, though on the *multum in parvo* principle. The plant of the collection was, we thought, a fine *Allamanda Schottii* trained around a globe trellis of wirework. One of its fine yellow flowers measured 5½ inches across, and we were informed that some previous blossoms had been of a still greater diameter. There were, however, lots of fine noticeable plants, such as *Dracæna terminalis*, *Colerus Verschaffeltii*, *Dracæna australis*, *Pandanus javanicus variegatus*, *Maranta zebrina*, *Tydas in varieties*, &c. Numbers of choice Mosses, Ferns, and Orchids were there also, descriptively sufficient to fill pages of this Journal, so giving a last fond look we passed out and by a Mushroom-house, where one would not mind making a bet, from the manner in which our guide pointed it out, that there were good Mushroom-rooms, and so through large doors into the kitchen gardens, and there we read old style with improvements creeping in, and from the hue of the vegetables it was easy to pronounce the soil to be in good condition. On we went, past some of the finest Black Currants we ever saw, into the second garden, glancing at the new rafters of a good-sized house springing up for the young men against and above the partition-wall, at the same time feeling not a little amused by observing a very old friend of ours, I include you Messrs. Editors! fall on the path from between the shirt and waistcoat of our guide, where he had hastily thrust it on our first appearance, no other than that current week's JOURNAL OF HORTICULTURE.

In the second garden the vineries and Peach-house are situated, four in all. The latter, about 100 feet long, has lately been erected by Mr. Johnson, and it is a structure after one's own heart. The newly-planted trees, some of which, taken from the open walls, are of considerable size, are looking healthy and promising well. Then comes an old vinery partly occupied with very ancient Black Hamburghs, having just a *souppçon* of mildew about them. This house is partitioned off, and the other compartment is filled with flourishing young Vines in pots. Next follows another house of the olden times, occupied with Lady Downes', Frontignan, and Black Hamburgh Grapes. The fourth house had for its inhabitants the Tottenham Park (the late name of the place), and other Muscats, Black Prince, and Black Hamburgh Vines. Taking the houses for all in all, better crops of Grapes, both early and late, could not be desired, and the Vines were in good condition—in fact the cropping was on the side of profuseness. Then, glancing at a good bed of German Stocks and Asters, coming on with unwilling steps, though quick, we trod the walk flanking the wall border, observing as we passed the healthy, well-trained Peach trees, which, after the manner of Peach trees on open walls, "used to bear, but do not now;" and, prophesying the removal of the huge old stumpy Apple trees and Filberts in the vegetable quarters, a door admitted us to the pleasure-grounds; so, turning round an instant to take a last survey of the whole, I reckoned the gardens, frame-ground included, to be about five acres.

Proceeding from the kitchen gardens towards the mansion, we paused to admire a fine Larch tree, reported to us by our conductor to be one of the original three first introduced into England. Its bole I computed to be 4 feet in

diameter, the spread of the branches being 31 yards across; proportionately for height, however, it was wanting in nice adjustment for the eye. A fine *Magnolia grandiflora* in full blossom grew hard by. The mansion now interposes—a square substantial house, which, when the improvements contemplated are all completed, will better suit the ideas of what a structure should be on so fine a property. From the portico a fine view is obtained, extending itself to Silsbery Hill; a central avenue-like glade also strikes the beholder as being in almost unbroken continuity to the very verge of the distance. In the immediate vicinity of the house Mr. Johnson's mind has been active, and must be now by no means idle, as the amount of work lately done and doing shows—fresh turf laid down in seeds, green, fine, and level; a new raised terrace garden, with fountain for centre, supported by two antique vases on pedestals.

The flower-border devices have white stone moulded curbs, lined just within with a broadish band of orange-coloured sand, then lines of fine grass turf about the same width, bordered all round with Golden Chain Geranium. Tom Thumb is employed for scarlet in proportion to the quantity of white stonework, and for other colours principally *Christine Geranium* and *Lobelia speciosa*. The effect was good, though rather circumscribed; but then there was King Croquet and a bowling green to interpose themselves between a farther contemplated flanking of colonnade, with balustrade to match the end of the flower-garden terrace, and to hug the magnificent line of Rhododendrons, of which no consideration but their death ought to cause the removal; for we should conceive that bank of American plants to be one of the finest, if not the finest, to be found in our land. Deciduous trees, American plants, choice Conifers, &c., are disposed about the lawn—not quite pleasing to the eye, perhaps, after dwelling upon the "every alley has its brother" plan of the new garden, and the uniform character of the mansion; but who would willingly do away with old friends? Amongst them we observed a young *Wellingtonia gigantea*, planted by His Royal Highness the Prince of Wales, February 15th, 1863. A new end to the conservatory, flanking one side of the terrace garden, has been added, and it is entered from thence, as well as from the house, thus forming, in conjunction with the old conservatory and orangery, an admirable winter garden. A *Musa* takes its place in the centre of the new end, but the late-flowering occupants intended to fill it were being prepared for that purpose in the pits in the frame-ground.

We now visit the conservatory, in which new borders have also been formed and curbed with stone mouldings running their whole lengths. The borders are filled with greenhouse plants in pots, having fine pyramidal Fuchsias at intervals in the centre. An *Acacia affinis*, 12 feet in clean stem of 6 inches diameter, takes a worthy central position. The structure is glass domed. It is 70 feet long by 25, not including the new end, which is 30 feet square, and the whole is heated by two of Ormson's boilers.

From the conservatory we enter the orangery, a Grecian temple-like structure, the occupants of which were temporarily placed outside upon the terrace for the benefit of their health, and necessarily so, as the roof is covered in, though I believe the spirit of improvement contemplates a roof of glass. Symptoms of its having not long since been made subservient to the "light fantastic toe" were apparent in gas-fittings, a temporary boarded floor, and other marks. This structure measures 100 feet in length, including the handsome columned portico with its eleven steps, down which we go, and pass through large iron gates to find ourselves in front of that side of the mansion looking towards the monument, and discover the reason why the conservatory was built in the form of a quadrant, as the back wall there forms a balustraded wing to the house, having the orangery for a final limb.

Another new wing and limb to match on the other end is now in course of erection, which will greatly add to the appearance of Savernake House, though the clink of the trowel was silent at our visit. Now taking leave of our civil and intelligent guide we jump into our vehicle, and course along through glade, avenue, and fine park scenery up to the monument, the undulating play of the ground and its features reminding one of the Long Walk in Windsor Park. From the monument, through the forest, past the menarch

Oaks about half a mile, when we turn off to the left, and arrive presently at the pretty little church of Cadley, built by the Marquis of Ailesbury a few years ago, as well as the parsonage within a short distance of it—both structures

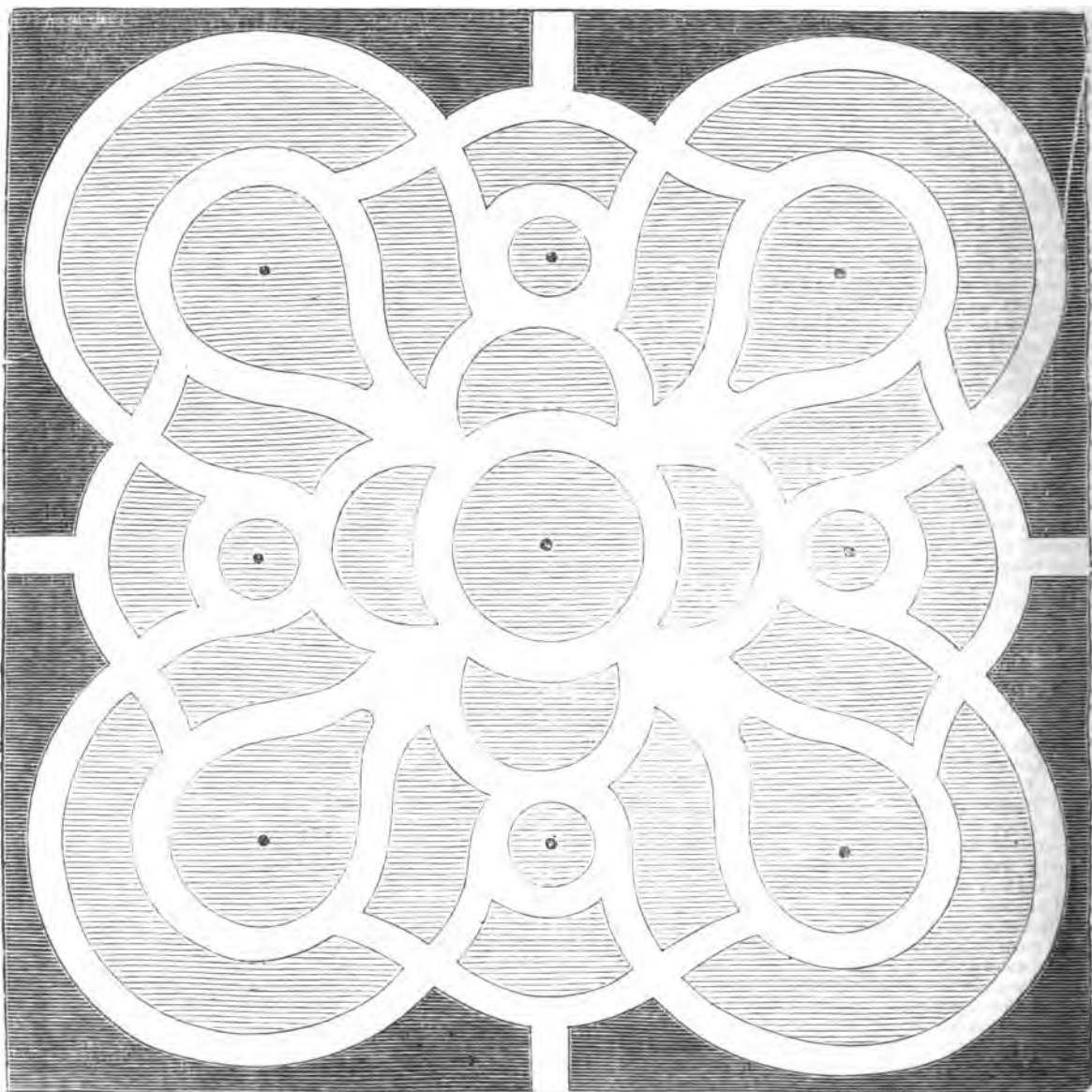
beautifully situated, truly pleasant spots either to live or to worship in—and so home to our comfortable inn in the gloaming by the Salisbury road, which skirts along just within the forest.—UPWARDS AND ONWARDS.

FLOWER-GARDEN PLAN—ADVICE TO A YOUNG GARDENER.

I AM a young gardener, aged twenty, with four years' experience of general work in kitchen, fruit, and flower gardens, and have also been accustomed to working in vineries and Peach-houses; but never having been engaged where there was a good collection of stove and greenhouse plants, I have little experience with them, except such as are soft-wooded, but I have had much practice in the propagation of bedding plants.

I have devoted a considerable portion of my time to drawing, a specimen of which I enclose. The design is my own, and might suit a cottager who had a small plot to devote to flowers. I would plant Irish Yew in the circular beds, as marked in the centres.

I am very anxious to go to England, but I have a difficulty to encounter which I am afraid will be a hindrance to my obtaining a good situation—I cannot leave my present situation till the 22nd of November. Whether would you advise me to continue as a gentleman's gardener, or apply to such a professional as Mr. Newton, who advertises in your Journal? I have an inclination to pursue the latter course, because I have had some experience in levelling and laying out kitchen and flower gardens, and have a taste for and take particular interest in it, I have also a desire to have more of this than I am likely to have by continuing as I am.—A YOUNG GARDENER, *Aberdeenshire*.



[We have no hesitation in commending the plan you have sent for a flower garden in a square. If entirely your own

design it is most creditable to you at your age, and seems to indicate that your natural talents lead in the direction of

laying out grounds, and more especially as you have had some experience in that line.

Such a flower garden would look well in any position, but best when looked down upon. We have no objection to the four circles being of Irish Yew; but the garden would look well if grouped all over, and, instead of being suitable for a cottager, it is quite fit for the garden of a duchess. Such a compact well-balanced plan must be ever more satisfactory than placing a circle here, a star there, and a diamond yonder, without the least connection with each other. Your design so far fulfils the necessary conditions advocated by the late Mr. Loudon—namely, that no one clump could be altered in shape without spoiling the figure as a whole.

With regard to giving advice as to your future employers, and as to what line connected with gardening you are most likely to succeed in—these are matters which no stranger with the best intentions could well give advice upon, and the responsibility of which we are obliged to decline when our opinion is asked publicly or privately. The bent of genius in the individual will do more to determine the matter than the advice even of the best friends.

We have had many letters lately stating the writer's circumstances even more fully than you do, but making similar applications as to the ins and outs of landscape gardening, and as to whether it would not be preferable to leave a gentleman's garden and go into a nursery or a market garden in order ultimately to engage in one of these branches of commercial enterprise. The chief arguments adduced by such inquirers against the service of gentlemen are the low rates of wages given to gardeners, the objections often made to their marrying and having families, the amount of labour of body and of mind expected from them, the discomfort arising from the low estimate of their social position held by employers of men who elsewhere are regarded and treated as gentlemen of intelligence, the great uncertainty of servitude, and the liability of being dismissed without ceremony and without assigned cause after twenty or thirty years of faithful service, and a remuneration from which little can be saved for the future. These are some of the black points. Nothing is said of the kindness and the sympathy of so many employers, of the quiet and tranquillity of the gardener's life, of the worry and mental strain which he escapes on a Saturday or rather the Friday pay-night which the young tradesman experiences when he has men or bills to pay, and cannot obtain settlement of his own accounts to pay them, or the feelings which he must smother when for some trifling omission he is well scolded by a paltry customer, and dare not resent it even by a look of discontent, and when he finds there is trouble in serving the many as well as in serving the few. We have had penetration enough to see that in some cases the chief causes of discontent proceeded from an unwillingness to feel the working collar under any circumstances, united with the desire to be the gentleman, and to reach at once the top of the ladder by any or every means, by any or what help, instead of ascending step by step by self effort and self denial—the only steps open to young men of thorough self-reliant independence of character.

We do not for a moment suppose that our "YOUNG GARDENER" is one of the class who aims at getting on the crest of the wave, careless who sinks provided they can help him to swim; and therefore, though we would not advise him, we will make a remark or two, merely adding that our publishing his letter will be the best thing we can do for him, and the best part of any advice we can offer. First, then, we would advise him, as he is only twenty years of age, to go into a gentleman's place, or a commercial establishment where stove and greenhouse plants are cultivated; as, independently of the professional lore, the great variety of forms will expand and amplify his ideas, and make him fitter to act as a landscape gardener and the layer-out of grounds and gardens. We are supposing that, like most north-country lads, he must chiefly depend on his own resources for making his way in the world.

Secondly. If he resolves to enter on the landscape department whilst engaged in his usual avocations, he should not only study works on landscape gardening, such as Repton's, Gilpin's, &c., but he should make himself well acquainted with the outlines of all trees and shrubs as well as their names, and should omit no opportunity of visiting fine parks

as well as gardens and studying the effects produced by trees when in light and shade, singly and in mass; and this will be of great benefit to him whether he succeeds as the superintendent of a large demesne or follows the art of landscape gardening. The mere ability to draw pretty flower plots may fit him for laying out small suburban gardens, but will leave him quite at a loss how to grapple with more massive effects as they tell on the beauty and picturesque interest of a park or woodland scenery.

Thirdly. Having commenced as a gentleman's gardener, we would advise him to continue as such some time longer, until his mind were more settled and he saw clearly what would be best for him to do. Meantime, as stated above, no time would be lost; and such preparatory work might as well be done in Scotland as in England, there being as much to be learned in one country as the other.

Fourthly. Do not run away with the idea that in laying out gardens and grounds all is gold that glitters. No doubt the landscape gardener is treated by his employers as an artist and a gentleman, but that is a poor affair if it does not put something reliable in the larder and the kitchen cupboard. A few, very successful, may be able to keep their carriage and an establishment in unison. Of all disagreeables, there is nothing to us more repulsive than the idea of being forced to keep up the appearance of gentility, and stinting, screwing, and starving to make that appearance. Sooner would we wear the apron and the flannel jacket, have a little in our pocket, and be able to look every man honestly in the face. Amongst the number of clever gardeners we have known, who in their riper and best days have left Cabbage-growing for the line, the level, and the pencil, comparatively few have thereby increased their comforts or their emoluments. True, they were paid pretty well when they had a job, and were then generally treated with respect; but when there was nothing to do the surplus gains were soon exhausted in supplying their necessities. Except a very few who rise to a high position and are constantly employed, the most fortunate layers-out of grounds are those likewise possessing a mercantile establishment.

Fifthly. As to your coming to England. November and December are rather bad times unless you were insured of work beforehand, which is generally obtained through friends. In some nurseries they are busy at that time taking up trees, &c., and for a few weeks they will give employment to any one that suits them. For anything like a permanent job, that, however, can only be obtained by a good character and letters of introduction, and the best time for that would be early spring. The letters should come from your present master, or the gentleman, or some of either of their friends who know or deal with the nurseryman to whom you apply. If you suited there, you might remain or be sent to some gentleman's establishment where a young man was wanted. It is next to folly for any young man to come to London now without these letters of introduction. Even then he should have a few pounds in his pocket, as we have known young men tramp to every nursery round London and fail to obtain a day's work. The very number seeking employment keeps wages down.

And lastly. Whether you remain as a gentleman's gardener, or resolve to be ultimately a landscape gardener, lose no opportunity of improving yourself. Knowledge is always to be carried about, and it will be your own fault if it ever make you conceited and proud. The most intelligent man is generally the most humble and considerate. Above all, if your aim is high spare no effort to write clearly and correctly. In your short letter we detect eleven or twelve instances of misspelling. This is a crying evil even amongst some that write well, and is often done more from carelessness than want of knowing better. One of the best correctives is to take a favourite author, learn short periods by heart, then write them down, and compare each word with the printed copy. Many have thanked us for the advice, and it is far from such dull and dry work as ever and anon consulting the dictionary. In a short time the dictionary may be pretty well a fixture as respects spelling.—R. F.]

THE BIG TREES OF CALIFORNIA.—Let us first walk upon the "big tree stump." You see it is perfectly smooth, sound, and level. Upon this stump, however incredible it may

seem, on the 4th of July thirty-two persons were engaged in dancing four sets of cotillions at one time, without suffering any inconvenience whatever, and besides these there were musicians and lookers-on. Across the solid wood of this stump, 5½ feet from the ground (now the bark is removed which was from 15 to 18 inches in thickness), measured 25 feet, and with the bark 28 feet. Think for a moment; the stump of a tree exceeding 9 yards in diameter, and sound to the very centre! This tree employed five men for twenty days in felling it—not by chopping it down, but by boring it off with pump augurs. After the stem was fairly severed from the stump, the uprightness of the tree and breadth of its base sustained it in its position. To accomplish the feat of throwing it over, about two and a-half days were spent in inserting wedges and driving them in by the butts of trees, until at last the monarch of the forest was forced to tremble and then to fall, after braving “the battle and the breeze” for nearly three thousand years. This noble tree was 302 feet in height, 96 feet in circumference at the ground. Again: A short distance from the above lies the prostrate and majestic body of the “Father of the Forest,” the largest tree of the whole group, half buried in the soil. This tree measured in circumference at the roots 110 feet. It is 200 feet to the first branch. By the trees that were broken off when this tree bowed its proud head in its fall, it is estimated that when standing it could not be less than 485 feet in height. 300 Feet from the roots and where it was broken off by striking against another large tree, it is 18 feet in diameter.”—(*Scenes of Wonder and Curiosity in California.*)

A PRACTICAL UNTRUTH.

It is very humiliating at any time and for any person to be compelled to make a confession of a little shabby delinquency, and it is especially so in the case of amateur gardeners, a body of men usually considered remarkably free from any taint of moral turpitude; and yet I must make a clean breast of it, and confess before the world that I have been guilty of a little secret doing not quite consistent with the high standard of gardening morality: so out it comes.

On my lawn I have two rather large and very prominent beds, which are planted with choice Gladioli, the surface being covered with Mignonette; now it is known to all growers of this very beautiful flower that under a hot sun their brightness and effulgence soon fades, it will, therefore, be obvious that I found it a difficult matter during the late intensely hot weather to sustain the beauty of my favourite bed. What was to be done? Must I submit to be twitted about the failure of my horticultural skill? This would never do; so I set my wits to work. Now, independently of these two prominent beds, I have several patches of these beautiful bulbs planted at different times, intended for cutting for dinner-table decoration; when, therefore, any of the spikes of flowers in the beds on the lawn became “dowdy,” I cut them down, and replaced them by spikes cut from the reserve-beds, and stuck into the ground amid the foliage of their decapitated *compères*, giving them a plentiful supply of water. In this condition they continued fresh and beautiful, expanding every one of their flowers to the very apex; and no one suspected I had been guilty of so shabby a trick, and to this moment the mystery of my success has remained veiled! Forgive me, ye armies of “blue aprons!” Confession is one step to amendment, and this one step I have taken.—T. S.

A NATIONAL HORTICULTURAL SOCIETY WELL MANAGED.

TWICE has the Massachusetts Horticultural Society had occasion to erect a hall sufficiently extensive to meet its requirements; and when laying the foundation stone upon the second occasion, no longer since than the 14th of last month, its President addressed the assembled members. We will make but one extract from that address.

“Gentlemen of the Massachusetts Horticultural Society:—“We are assembled here to-day, agreeably to your direction, to take the first formal step towards the erection of a building for the use of the Society, to more effectually carry

out its purposes of encouraging and improving the science and practice of horticulture, promoting the amelioration of the various species of trees, fruits, plants, and vegetables, and the introduction of new species and varieties.”

“Such were the original objects of the Society, as named in the act of incorporation, and such, I am happy to say, they have always been, and, I doubt not, ever will be, as long as this beautiful edifice you are about to erect shall endure.

“It is since the completion of the former hall that the progress of the Society has been rapid, and its influence felt throughout the entire country. New life and fresh vitality were infused into the Society. It had the sympathy, as it had the substantial aid, of the public. It was appreciated as its founders intended it should be. Its objects seemed all at once to become apparent. It encouraged and promoted the science and practice of horticulture; it stimulated the production and introduction of new flowers, fruits, trees, and plants; it rewarded the cultivator for the best specimens of his skill; it gathered together, for the use of the members, a library of the most celebrated English and French works on gardening; it made known through its weekly and annual exhibitions all the choicer productions of the garden, the orchard, and the greenhouse; it awakened a taste for ornamental and landscape art, and it disseminated through its annual reports a vast fund of information upon every branch of horticulture.”

We could name one or two gentlemen who ought to blush when they read this, knowing, as they do, how just the reverse is the truth if spoken of our Royal Horticultural Society.

THE EYE EDUCATION OF GARDENERS.

YOUR correspondent who signs himself “A MAN WITH AN EYE” seems to be very imperfectly acquainted with gardeners generally—I mean real gardeners; for it is not every man who “dons a blue apron and shoulders a spade” that can be truly called a gardener. While we see so many advertisements for a gardener who thoroughly understands the management of hothouse and greenhouse, kitchen and flower garden, and can look after a horse and chaise, and also wait at table, there will always be plenty of grooms and coachmen ready to style themselves gardeners for the sake of the little higher pay than grooms generally obtain, and, of course, as far as the garden is concerned, they will be found deficient in the required eye, and frequently of both visionary organs. I think it must be with such men as these that the “MAN WITH AN EYE” has had to do, and not with gardeners; for although a gardener myself, and by no means a perfect one, I may safely assert without fear of contradiction that gardeners as a body have very good eyes, seeing many imperfections in the places under their care that are quite unnoticed by their employers, and are too frequently powerless from the want of adequate assistance to remedy these (to them) visible defects. I am quite ready to admit the imperfections in many instances of gardeners—I mean men who from the early training and opportunities they have had ought to have become masters of the art of managing a gentleman's garden establishment, whether large or small; but still I would advise the “MAN WITH AN EYE” to become better acquainted with real gardeners before he continues denouncing them as so void of the properly educated eye. I have felt it a duty to vindicate the character of my fraternity, and sign myself, not a man with one eye only, but I hope—ONE HAVING BOTH EYES OPEN.

SUPPLYING LONDON WITH POTATOES.

FORMERLY the great Potato mart of London was in Tooley Street, and at the wharves which lie between that thoroughfare and the Thames vessels from all the ports on the eastern coast of England, laden with Potatoes, used to deliver their cargoes. The Tooley Street market, however, may be said to exist no longer, nearly the whole traffic in the carriage of Potatoes having been diverted from the coasting trade to the railways, and to the Great Northern in particular. So silently has this change taken place, that even railway shareholders themselves have not been aware of it, and therefore it was that the announcement made by

Mr. Packe, at the recent meeting of the Great Northern Company, that the directors were expending £40,000 in improving the condition of their Potato market, took his audience completely by surprise. A Potato market! Have we such a thing? Where is it? How possibly can £40,000 be required for any such purpose? Such was the exclamation, and such the inquiries which greeted the announcement.

These inquiries we shall now endeavour to satisfy, for the information not only of the Great Northern shareholders, but the public at large; and the facts and figures which we shall have to place before them are so extraordinary that they cannot fail to add to the astonishment and surprise which were then expressed. Scarcely had the line been opened when the Yorkshire Potato growers applied to the directors to afford them some facilities for the transport of their produce to the London market. Their request was complied with, and the conveyance of a few hundred tons of Potatoes in one season from Selby to London was the beginning of a carrying trade, which may now be roughly estimated at 85,000 tons a-year, or (taking one ton as sufficient during twelve months for consumption by a family of ten persons) an amount of Potatoes sufficient to supply the wants of 850,000 persons. Such has been the development of the trade in the course of twelve years; and as it is a growing trade, and one sure to be stimulated by the increase in the amount of accommodation afforded to it, it is not hazarding too much to say that before the lapse of another period of twelve years, one-half the entire population of London may expect to be supplied with Potatoes from the Great Northern Railway.

At present this trade is conducted by thirty-five factors, who have hitherto carried on their business in little wooden huts, not unlike sentry-boxes, paying a small toll to the company for the privilege. Badly, however, as they have been housed, they have been far worse situated in regard to the facilities of receiving and forwarding their consignments. They have been altogether without store accommodation, a circumstance which compelled them to get rid of the Potatoes the moment they removed them from the company's waggons, which, in itself, has been no easy task, owing to a deficiency of siding accommodation, and the consequent blocks upon the lines. On one occasion, as stated by Mr. Packe, there were as many as nine hundred trucks waiting to be unloaded. This must have been a great inconvenience to the factors, and no less an inconvenience to the company, whose rolling stock was to that extent crippled so long as the block continued.

The recurrence, however, of any such drawbacks is now about to be obviated, for the whole of the old terminus in Maiden Lane has been set aside as the area of the new market. On that site the company is now building a long range of warehouses, thirty-eight in number, fitted with dry and well-ventilated cellars for the storage of the Potatoes. In front of each there is fitted upon the arrival line a turntable, communicating with a short line of about 60 or 70 feet long, which strikes from the main line at right angles, and runs up to the warehouse door—in other words, the line throws out here thirty-eight short spurs. Each spur is supplied with a wide platform, at which four waggons can with ease deliver their goods, to be at once carried into the warehouse, and stored there, either on the floor or in the cellars. It may not be out of place here to mention that in times of frost Potatoes are much safer in dark cellars than in places where they are exposed to the light. It will be seen by the above explanation that immediately on the arrival of a Potato train it can be broken up into as many portions as there are consignments in it, and that each factor can have the wagon consigned to him turned in upon his own 60 feet of line, and brought alongside his own platform, there to be at once emptied and made again available for the service of the company. The arrangement will be effectual against the recurrence of blocks, add to the capacity of the company's rolling stock, and enable the factor to take advantage of whatever demand may rule the market.

The facilities to be afforded to the delivery of the Potatoes will not be less convenient than those connected with the reception of them. The warehouses will also have a front towards Maiden Lane, but not upon it; for between them and that thoroughfare the company are constructing,

parallel to it, a wide and perfectly level road, on which the drays which are to convey the Potatoes from the factor to the dealer can come in, load at the warehouse door, and thence carry off the goods. The company, in order to guard against anything in the way of irregularity, will have their own constables placed at the gate leading into this private road, and their duty will be to see that each dray takes up its proper position, and does not loiter so as to inconvenience others.—(*Railway News*.)

WORK FOR THE WEEK.

KITCHEN GARDEN.

In dry weather hoe every part of the garden thoroughly, as those seeds that were ripened in summer (where weeds were allowed to perfect seeds and to shed them), have now vegetated and may be destroyed effectually, which is better than allowing them to remain till the spring amongst other crops. When a kitchen garden is at this season well stocked with autumn, winter, and spring crops, all neatly arranged and well cultivated, and the walks in good order, we think this is not at all the least interesting period of the year in this useful department of gardening. *Cabbages*, plant out immediately the main crop of spring Cabbages, and after planting them take the first opportunity of a dry day to fork over between the plants. *Cauliflowers*, prepare ground on a south border or other favourable aspect for planting them under hand-lights. A quantity may be pricked out of cold frames to receive protection from severe frost in winter. *Endive*, plant close under walls where they can be easily secured from frost. *Herbs*, make fresh plantations where required. *Lettuce*, prepare ground for plantations of Brown Cos and Hardy Green. A double row of them may be planted at the foot of the south, east, and west walls, the plants to be 4 inches apart in the row; and should they all stand over the winter, which is seldom the case, every alternate one can be removed to form other plantations. *Potatoes*, they may be taken up as soon as the tops are dead, but the late sorts had better remain in the ground for a time to ripen well. *Turnips*, thin young crops of these and Spinach before they become weakly and drawn, through standing too closely together.

FRUIT GARDEN.

Apples and Pears that have been gathered during the last fortnight should now be looked over carefully, when it will be found that those that were bruised or in any way injured have begun to decay, and unless removed will infect others. Filberts are now ripe in most situations and should be gathered. They keep well in a moderate-sized hamper packed firmly. Put the fruit-room in proper order for the reception of its winter stock. Use no straw or hay about the fruit, as materials of this kind are very liable to spoil the flavour of fruit laid amongst them. Handle the fruit, especially Pears, as little and as lightly as possible. Thin the leaves of early Cherry trees on walls so as to ripen the wood. Protect Plums from insects, and closely net-up *Imperatrice* and other keeping varieties. Expose Raspberry suckers so as to ripen them thoroughly. Make new Strawberry-beds, clear runners away from the old plants.

FLOWER GARDEN.

The removal and transplanting of evergreens may be undertaken from the present time to November with more chances of success than at any other period of the year, and for large specimens no other season should, if possible, be selected. The natural warmth of the soil about the roots, and the close damp weather generally prevailing in the autumn months, are the principal causes operating to insure success. Add to this a principle, well known to those who have planted largely at all seasons, that plants form roots more readily after the season of active growth and during the ripening of the wood than at any other. Whether planting is done in masses or singly, the ground should be well trenched and drained before attempting to put in a plant; for single plants, if they are intended to thrive, a mere round hole just large enough to hold the roots is not sufficient, but the ground for some space round should be well worked-up to facilitate the progress of the future roots, as well as the escape of water. As each tree or shrub is planted secure it from the action of high winds. Mulch the surface to prevent

evaporation from the soil, and give besides occasional waterings at the roots when the earth becomes dry, and then only sprinkle the tops well each evening, wetting the bark and foliage completely. Plant early bulbs. Protect Auriculas, from heavy rains. Pot the layers of Carnations and Picotees. Tie-up and regulate Dahlias as they bloom, removing all bad and small blooms.

GREENHOUSE AND CONSERVATORY.

House greenhouse plants before heavy rains come on, the tender sorts first; clean the pots and soil, stake, relabel, and clear off insects before they are taken in; Camellias and Azaleas to have a cool airy place. Herbaceous Calceolarias and Cinerarias to be shifted and grown on. Heaths and New Holland plants to have all the air that can be given by the sides and sashes being left open in fine weather. The most desirable objects to secure in the management of the majority of plants in these structures is procuring a robust and hardy growth, and lessening their vital activity that they may gradually accommodate themselves to the changing circumstances of the season.

STOVE.

Give abundance of air here at every convenient opportunity, to assist the plants to complete their growth in a strong and healthy manner. Sprinkle the walls and pathways twice or thrice daily, and dew the plants over occasionally with tepid water on bright days. Maintain a brisk temperature in the daytime, but allow the thermometer to fall to about 60° during the night. Twiners on the roof should now be more than ever kept within bounds, cutting back all shoots that have done flowering and tying the others, so as to obstruct the light as little as possible. Achimenes, Gloxinias, and Gesneras that are properly ripened off may be stored away in any dry place where they will be secure from frost; but take care to place them where they will be free from damp. Let any growing plants that require more pot-room be shifted as soon as convenient, in order to have them well rooted into the fresh soil before winter.

FORCING-PIT.

Those who intend to provide a rich display early in the spring should now select the plants adapted for that purpose. As one important division of good forcers we would recommend the ordinary American shrubs, many of which, although too large for the drawing-room stand, are well adapted for placing in conspicuous stations in the conservatory or mixed greenhouse. Of such are the various Rhododendrons, Azaleas of the nudiflora class, with various hybrids, the *Rhodora canadensis*, *Ledum latifolium* and *thymifolium*, *Kalmia latifolia*, *angustifolia*, and *glaucula*, *Andromeda pulverulenta*, and *Daphne*, especially *cnereum*, and even the old *Polygala chamæbuxus*. Such should be obtained forthwith, potted in rather small pots, and plunged in the warmest corner of the garden, whence they may be successively introduced to the forcing-pit from the middle of November until February.

PITS AND FRAMES.

Continue to afford young stock in pits and frames careful attention, and endeavour to have it well rooted and strong without keeping it so close and warm as to render it sappy and liable to damp off on the first approach of wintry weather, as is often the case with stock brought on in heat late in autumn, and then stored away in cold pits for the winter.—W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

Cabbages.—In most places at all moist the most forward crop for early spring work must now be put in. We could not do so ourselves, as the ground was so dry. Our Cabbages will follow Onions; and for a depth of 2 feet the ground was white with Onion roots, and as dry as ashes taken from under a grate. No wonder that most of our September and October Peas refused to grow and produce as usual. The rain of Thursday night and Friday will help us greatly, and has given us a good supply in our tanks. Previously to its coming we had pricked out lots of the second sowing of Cabbages, with two or three small leaves. In mild winters these will stand better than the larger plants previously pricked out, and which, when raised in balls, will

suffer but little from the moving. Watered with sewage Coleworts, and Early Ulm Savoy, cabbaging nicely, and just needing a little more moisture to make them vigorous and tender. Went over the old plantation of Cabbages; cut off any split heads, stripped off any withered leaves, and left them between the rows, which will alike shade the ground and afford nourishment by their farther decomposition. Some of the larger outside leaves, stripped off previously, and scattered along the rows, maintained a degree of moisture about the roots of this useful plantation, which kept yielding most effectually, though from the beginning of June until Friday morning we have not had enough of moisture to penetrate the ground above a quarter of an inch. Now, after this rain, we shall know little more of drought this season.

We will not now regret the great care taken to keep things moving in the right way, when we could not give them the water they needed. We have never forgotten what was said by Mr. Barnes, of Bicton, some years ago, on this subject. It was to the effect that when fine weather came after frost, or, we may add, excessive drought, people were little inclined then to make any excuse for the deficiencies resulting therefrom. It is certain that, if by a little extra care and attention we could have prevented a disaster, and did not use that care, we should be haunted at least by our own self-accusations, and that, to sensitive minds, would be punishment enough. Extraordinary care to keep off a looked-for evil, even if the evil do not come, is much better than fretting and fuming over a disaster we did nothing to prevent.

Cauliflowers.—Watered with sewage water those that are coming nicely in. A few here and there are spindling prematurely; but the little sewage water and mulching have kept them generally in fine condition. We shall now be able to dispense with the old Peas that we kept standing, though rather unsightly, for the shade they yielded from the bright sun. The late Mr. Loudon, who did so much for gardeners and gardening, had an especial horror at seeing plantations of old faded Peas in a garden; so much so, that when he contemplated a northern tour in the autumn, a friend, who suspected that some northern gardeners were a little easy in this respect, wrote them to give them a hint to have all the offensive subjects removed. Even Mr. Loudon, however, with his fine taste for the tidy and the beautiful, would at once have agreed that there were occasions when these, usually so undesirable, should be made subservient to the useful. Utility will always have a beauty and an interest peculiarly its own. Not long ago one of our enthusiastic amateurs expressed his surprise at seeing several rows of these withered-hauled Peas in our garden; but when he was desired to observe the fine Cauliflower between them, he put with his note-book to remind him, as he said, of the "wrinkle," as, even with the assistance of moderate waterings, he had not been able to obtain a close head of Cauliflower for the previous six weeks. With the smallest modicum of water these Cauliflowers owed their luxuriance and good heads chiefly to mulching and the flickering shade from the old Peas. We will now need the shade little or no longer. Our succession crops even when earthed-up are all mulched with long stable-litter, as we had nothing better to give them. Some younger ones had it spread over the ground, and but for the rains we would have done the same with the last plantation, put out chiefly for the purpose of lifting and placing under protection, or protecting where they are.

Pricked out a lot of young Cauliflower in a bed, the leaves the size of a shilling, as they were thick where sown, and this will render them stubby for being transferred to pots or under hand-lights. Both plans answer well; those in pots are kept under protection, shifted once or twice until the middle of March, and then turned out into rich soil. We generally obtain the heads pretty well as soon from hand-lights. In the larger size we plant out nine or more plants, and then thin in February or March to five. In the first part of the winter we do not mind the plants being frosted, as they are then small; and if the frost should be severe we then cover the glasses with litter, or a hood, made like that often used for bee-hives, and allow the cover to remain until the thaw has come and softened the soil inside, giving all necessary air to keep the plants stubby and hardy.

By the end of February we give less air, using the heat of the sun to make the plants grow, and covering them every cold night, and as the plants become large they are protected until the weather is warm enough to enable them to stand without their glasses. In planting under these hand-lights, or even in a bed to stand the winter, we usually cover the surface of the soil for half an inch or more with rough sand or road-drift, which to a certain extent is a preservative against damp and slugs. A little dry slaked lime may also be put between the rows. The sand is what our amateur friend would have called a wrinkle. An old gardener of the old school, who was very fortunate with his early Cauliflower, told it to us as a great favour, and a secret we were to keep. He has long been beyond any regretting that we have not made the best of the secret in what he then considered the best way of treating it.

Lettuces.—Tied-up some behind a wall to succeed those at present in use. Planted out more in borders, some to be protected for winter use if necessary. Sowed the last crop as stated last week on rather hard ground out of doors.

Endives.—Watered the most forward and planted out more. Our Chicory will do little good this season, as owing to the drought it made no headway. However, we always find that Chicory and even Endive, however nice, are generally at a discount when a good Lettuce can be had. In our own case winter salad was once a matter of importance, but now it is comparatively seldom called for. In such cases some must be kept in case it should be wanted. It would generally be more satisfactory to the gardener if such things were wanted regularly or not at all, as then the best could be made of the room.

Cucumbers.—The same as to Cucumbers. What is the use of keeping up a winter supply, when a Cucumber is scarcely tasted at table from the middle of October to the middle of April? The places had better remain empty for several months, and fuel, fermenting material, &c., be saved. Those in frames should now have the linings banked up, to keep up internal heat, and the inside be kept rather dry, if we should have dull weather. Those bearing in pits should also have a little artificial heat in cold dull weather. Young plants, with two or three rough leaves, should now be introduced for winter supply, where winter Cucumbers are a feature. They are most easily grown in houses heated by hot water, and do best for winter in large pots or boxes, or in pits, where the roots are somewhat confined. One cause of success is to have the plants as strong as possible, and free from all sorts of insects, before the dark days come on, the plants being kept sturdy, instead of drawn, by plenty of air at all favourable opportunities. A second means of success, where the fruit is wanted chiefly at Christmas and onwards, is to allow the plants to bear little or none before the middle of December. We have seen plants loaded in November that were intended to carry on through the winter and the spring, but they mostly refused to do much good after the new year. We believe, ourselves, that one Cucumber before the new year will distress plants more than two or three Cucumbers after that period, when the sun, instead of waning, is gaining power.

Beetroot.—As we are upon salads, we may mention that our transplanted Beet has done well, and been in use for a month past. We think we shall transplant in future. For several seasons we have not been able to keep a seedling in the open air. No sooner did the red seed-leaves appear than it was whisked off. Even netting was not effectual, for the birds managed to find their way under it, and after chattering defiance with all the energy of terror, generally escaped before we could catch them. Sparrows and green linnets seemed the principal depredators. Young plants of the *Lobelia kermesina* were treated the same way. We were obliged to thread and net the lines to preserve them. There is so little in common between the Beet and the *Lobelia*, except the colour, that we are anxious to know if a similar crimson colour has been equally attractive elsewhere. We found the lines of small thread were quite as effectual in scaring the birds from the *Lobelia* as nets, or even more so; for they will walk round and round the nets until, acquiring courage, they will walk or crawl under them, getting their head in first, and, thief-like, their body afterwards. The stretched thread seems to impress them with some indefinable dread.

Celery.—We found our little heads of the Dwarf Incomparable Celery better than we expected, and have been using it for table for eight days. In ordinary seasons we could have had it good by the middle of July, though, like a good many other things, even Celery loses its zest when given too early or for too long a period. Our late friend Mr. Beaton found this out when he sent young Potatoes to table in November and December. He found it more prudent to send them in after the shortest day was passed and the new year had commenced. The new year gave a charm to the new Potatoes which they wholly wanted in the murky cold days of December. So long as prejudices are innocent, there is no harm in humouring them, and all the more when we are paid for doing so. We allude to this Incomparable Celery chiefly for impressing the importance of its being grown by the cottager and the amateur, who have little room at their disposal. Of course, our heads are rather small, but almost every bit except the outside leaves is fit for table, and we send from these little heads, about a foot in length to table, from plants about 15 inches in height. We have just measured the bed from which we are now raising the plants for cheese, &c., every day. It is 4 feet wide and 52 feet long, and has four rows in the bed, and seventy-one plants in each row, making 284 plants in the bed. The plants are just close enough in this dry season, about 10 inches apart, but there is still room for their growing larger, and in a dripping season were there some thirty or forty plants less in a bed, there would still be a great number of plants in a little space. Even now, small as the plants are, there is as much in them fit for table as is often met with in great, rampant, Giant Celery that requires much room and a great bank of earthing-up, besides the labour of doing it. From 15 to 18 inches on each side of the bed will be ample space for earthing-up. In fact, if the Celery were to stand long, 15 inches would be quite sufficient; so that for a space altogether from 6½ to 7 feet wide and 52 feet long, you might not only plant but earth-up 284 heads of Celery in fine order for the dinner-table. In a more dripping season some 230 to 240 very fine heads could be obtained. Our friends who can spare their 20 or 30 feet for a bed, may see how many heads they may have in little space. The landlord of a large hotel who has a large garden but never can obtain a tithe of the Celery he wants from it, took us to see his rows, and poor miserable stuff it looked after all his watering. He is now convinced that on the bed-system and with this dwarf kind he can have better produce and four times the quantity from the same ground. For early taking up, a trench may be dug out in the usual way. When intended to stand the winter and the spring, we prefer taking out little of a trench, but having the surface of the bed, after the addition of the dung, quite as high as the general level. When we dig a narrow trench to give the little earthing-up that is necessary, that helps to keep the bed dry in winter—almost as necessary to prevent rotting then as moisture is essential to growth in summer.

We have earthed-up finally another piece of the bed, so that our last earthed-up shall be ready for us in from twenty-five to thirty days; but owing to the plants being thick, they have not wanted that blanching time this season. In fact, when a string is placed round them the heart becomes white, whilst the top keeps growing freely. We use a few coal ashes next the stem, which keeps slugs, &c., from nibbling them.

Though the Celery is shorter than usual, owing to scarcely having any water after planting until the 10th of September, we have not, either with the Dwarf or a tall Red, noticed as yet a single bolted plant; and under the circumstances, the weather being so dry and no water at command, we attribute this result to the surface-stirring, the mulching with half-decayed leaves, and sticking a row of evergreen branches on each side of the beds. We are thus particular as to these points of detail, as some visitors, even after inspecting our empty ponds and reservoirs, would scarcely believe that we had not been watering at least twice a-week, and also because we should like to see a little bed of Celery in every cottage garden where the inmates of the cottage liked such a vegetable, and which they now generally consider beyond their reach.

The work done in other departments will be detailed next week.—E. F.

COVENT GARDEN MARKET.—SEPTEMBER 17.

But little alteration has taken place either in the supply or quotations since last week's report. Good Pines are rather scarce, but Grapes and Melons are plentiful. Peaches and Nectarines, though sufficient for the demand, are not so abundant. Of Cob-nuts the supply is rather short, and prices have advanced. The best dessert Pears consist of Louise Bonne of Jersey, Duchesse d'Angoulême, Williams' Bon Chrétien, and Marie Louise. Of Apples some very good samples of Ribston Pippin have made their appearance from Jersey. Coe's Golden Drop Plums have also begun to come in.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.	
Apples.....	1	0	2	0	Mulberries	punnet	0	6	1	3
Apricots	0	0	0	0	Nectarines	doz.	3	0	8	0
Cherries	0	0	0	0	Oranges	100	12	0	20	0
Currants, Red....	0	0	0	0	Peaches	doz.	8	0	12	0
Black.....	0	0	0	0	Pears (kitchen)....	bush.	5	0	10	0
Figs	1	6	2	8	dessert.....	doz.	1	0	3	0
Filberts & Nuts 100 lb.	55	0	70	0	Pine Apples	lb.	4	0	8	0
Gooseberries	0	0	0	0	Plums	doz.	2	0	7	0
Grapes, Hamburgs lb.	1	6	4	0	Quinces	do.	0	0	0	0
Muscats	3	0	7	0	Raspberries	lb.	0	0	0	0
Lemons	100	12	0	20	Strawberries	punnet	0	0	0	0
Melons	1	6	4	0	Walnuts	bush.	14	0	20	0

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.		
Artichokes	each	0	4	0	8	Horseradish ...	bundle	2	6	5	0
Asparagus	bundle	0	0	0	0	Leeks	bunch	0	4	0	6
Beans Broad.....	sieve	0	0	0	0	Lettuce	score	1	6	2	0
Kidney.....	doz.	3	6	4	0	Mushrooms	pottle	1	6	2	6
Beet, Red.....	doz.	1	0	3	0	Mixed. & Cress, punnet	0	2	0	0	0
Broccoli	bundle	1	0	1	6	Onions	bunch	0	4	0	6
Brussels Sprouts	sieve	2	0	2	6	pickling	quart	0	6	0	8
Cabbage	doz.	1	0	2	0	Parsley	doz. bunches	4	0	6	0
Capitums	100	3	0	5	0	Parsnips	doz.	0	9	1	0
Carrots	bunch	0	5	0	8	Peas	quart	0	6	0	0
Cauliflower	doz.	0	0	0	0	Potatoes	bushel	2	6	4	0
Celery	bundle	1	0	2	0	Radishes doz. bunches	0	0	0	0	0
Cucumbers	each	0	6	1	0	Savoy	doz.	0	0	0	0
pickling	doz.	1	0	3	0	Sea-kale	basket	0	0	0	0
Endive	score	1	3	2	6	Spinach	sieve	3	0	6	0
Fennel	bunch	0	3	0	0	Tomatoes	doz.	2	0	3	0
Garlic and Shallots, lb.	0	8	0	0	0	Turnips	bunch	0	8	0	0
Herbs	bunch	0	3	0	0	Vegetable Marrows doz.	2	0	3	0	0

TRADE CATALOGUES RECEIVED.

E. G. Henderson & Son, Wellington Road, St. John's Wood, London.—List of Bulbs and other Flower Roots.
Ambrose Verschaffelt, 50, Rue du Chaume, Ghent, Belgium.—Prix-courant pour l'Automne, 1884, et Printemps et Été, 1885.

TO CORRESPONDENTS.

* * We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to The Editors of the Journal of Horticulture, &c., 171, Fleet Street, London, E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

HYBRIDISED PLANTS (E. M., Southampton).—Your inquiries involve too intricate and too uncertain a field for us to reply to in a note; and to write upon it fully would occupy more time and space than we can afford. Practice will be your best guide. Experiments, presided over by a sound judgment, led the lamented Mr. Beaton to the success he attained. Many useful communications from him upon the subject are in our back volumes.

ELEMENTARY BOTANY (H. W. P.).—Hemfrey's "Radiments of Botany," and Macgillivray's edition of Sir J. E. Smith's "Introduction to Botany," will suit you.

FLOWER-GARDEN PLAN (N. C., Nenagh).—See what is said in reply to "A YOUNG GARDENER." See also many plans in this Journal, and in the cheap manual "Flower-Gardening for the Many." We can form no idea of the size of your grass plot, on which these clumps are placed in so thick and heterogeneous a manner. Even with the dimensions given we cannot undertake to furnish plans; but one of two things we would do, either have a regular plan placed in the middle of the lawn, with more lawn at each side; or, as the house seems to be in the centre, and facing the lawn, we would leave the lawn open, with the exception of a few ornamental trees, and we would run a row of small and less circles alternately all round next the narrow gravel walk, say 4 feet or so from it. You might then see your flowers as you went round the walks, and be cheered with the green turf between them from the windows. This would be a simple and elegant way of laying out the flower garden. At present there is neither plan, simplicity, nor elegance.

DIRECTIONS FOR PROPAGATING (A Young Beginner).—What do you wish to propagate? We cannot undertake to give, in one answer, directions for propagating all the plants in every department of the garden.

FLOWERING PLANTS FOR ROCKERY (Leighton E.).—You must not expect Stonecrops to flourish under the same conditions as Ferns. They are only suitable for light, airy, sunny situations as almost all flowering plants are; Ferns, on the other hand, luxuriating in shade and moisture. The flowering plants should have the sunny, and the Ferns the shady situations. Of Stonecrop or Sedum the best dozen are—Sedum Stebbinsii, telephium, obtusatum, septangulare, Forsterianum, cepaea, Beyrichianum, hybridum, oeruleum, anopetalum, Ewerii, and kamtschaticum. There are numerous Saxifragas, as S. Stansfeldii (a good English variety), oppositifolia, and var. alba and major, Andrewarkei, cotyledon, cuneata, ciliata, granulata, granulata flore pleno, polita, rotundifolia, Sternbergii, groenlandica, and very many others all fine rock plants. Besides the above, the following would be suitable—Helleborus viridis in many varieties; Linum perenne; Geranium sanguineum, laeocastriense, and Andrewarkei; Iberis sempervirens, gibraltarica, and saxatilis; Hypericum montanum; Gnaphalium supinum; Dryas Drummondii and octopetala; Doronicum caucasicum; Draba verna, hirta, and hesperidifolia; Cochlearia officinalis and groenlandica; Cephalaria alpina and montana; Cerastium tomentosum, alpinum, repens, and Biebersteinii; Arctotis breviscapa; Ajuga reptans variegata and reptans alba; Achemilla alpina, montana, and fissa; Alyssum maritimum variegatum, saxatile, alpinum and its variety variegatum; Antennaria margaritacea and triplinervia; Arabis alba, stenopetala, procurrens, and bellidifolia; Vinca, &c.

MAKING GROUND IMPERVIOUS BY WORMS (F. G. C.).—A floor or bottom to stand pots upon may be made impervious to worms by placing a layer of lime riddings an inch thick, and then ramming it firm with a wooden rammer. Repeat this again and again, until a foundation is made 4 inches thick, on which place 6 inches of ashes. The bottom may be made more secure against worms by mixing the second layer of lime riddings with gas tar. It should be borne in mind that gas tar is death to any roots that come in contact with it. If you place 14 lbs. of lime in a tub, pour thirty gallons of water upon it, stir it well up, let it stand forty-eight hours, then stop the holes in the pots with clay, and deluge with clear lime water, the worms will come to the surface. Three hours flooding will be sufficient, then the drainage must be allowed to act. You could not have a better place for wintering Geranium cuttings than the room but little used, placing them on shelves, and unless the draught be great they will enjoy fresh air. You must take measures to guard against frost, watering no more than is absolutely necessary to keep the plants alive. A dark place is very unsuitable: though it will do for old plants, it is not adapted for young ones.

STANDARD ROSES (A Subscriber).—Standard Roses are apt to die off in light soils especially when budded on the Dog Rose; but we have them upwards of twenty years old, and very healthy even now. Cover the roots with manure in November, as you propose, and the winter rains will wash the greater part of the nutriment down to the roots. Do not prune until the beginning of March; and, unless the weather be very severe, the heads are better uncovered, but a little hay wrapped round the heads in frosty weather, to be removed in mild, is a great protection. We fear your thatching will do more harm than good, and we think it totally unnecessary, unless you have Lapland winters. If you do thatch them let Christmas be at hand before doing so, and remove the covering gradually, commencing about the middle of February, so as to disperse with it altogether by the middle of March.

DUTCH GARDEN (An Old Subscriber).—We think your Dutch garden will look very nice. If you wanted more flowers you might double it by filling that end of the mansion to the boundary by a similar plan. We approve of the plan for fruit trees at A. Then, for the space at B, in front of the house, we could not decide without seeing the ground and the surrounding; but in this, by way of contrast, we should think a few Pinuses, singly, as Araucaria and Deodar, and two or more circles of Rhododendrons, would suit you best, so as not to interfere with the lawn character of that front. If something of this were done the Dutch garden would be most effective, if shut off from the rest of the ground by a fence or wall.

CLOTH OF GOLD GERANIUM.—Will your correspondents state how this variety has behaved this season? With me the supposed strong-growing Cloth of Gold is no larger than when first put out, and not nearly so healthy; whereas Golden Chain, the slow grower, has been very satisfactory.—J. A.

FERNS (Mrs. H.).—There is no serial, either weekly or monthly, now publishing on this order of plants. Sir W. Hooker's "British Ferns" costs two guineas, and his "Garden Ferns" are of the same price.

SEEDLING PANSIES (L. F. F.).—All of ordinary merit except one with white ground, yellow eye, and pale lilac edging to upper petals, and lilac pencillings of the lower petals.

HOLLIES NOT THRIVING (E. C. S.).—It is not at all unusual for a large Holly to look badly for some years after transplanting; and we are far from certain that severe pruning would do it any real good. The fact of your Holly hedge not doing well is a proof that your clayey soil is not the proper place for it. We would, however, remark that digging a trench, or rather ditch, by the side of the Holly hedge, so as to just cut the tips of the roots, and filling that ditch with sandy road-scrappings, will most likely induce the roots to strike into a more genial medium, and produce a healthier state of things.

ROMANIZING TO NEW ZEALAND.—We have received the following in answer to the query of "E. W." "A gardener would do well in New Zealand that would work, dig, mow, sew, or be handy at anything, as the country is rough yet, and gardening there is very different from here. A friend who went nearly five years ago has saved £30 per year, with a small family, but works at anything. The work is not harder than in England. The day is reckoned eight hours for work. What seeds to take, or any other information, I should be glad to give; but I advise 'E. W.' to think well before he emigrates, as it is a very serious journey.—W. C."

INDEX (Bert).—Vol V. concluded with the year 1883, and the index was published with No. 146, January 12th, 1884. We suspect you mean Vol. VI., the last number of which was published on the 28th of June. By sending your address, two postage stamps, and the number of the Volume, the proper index will be forwarded to you.

PLANTS AND HARDY ANNUALS FOR SPRING BLOOMING (Leighton E., and W. Browne).—Saponaria calabrica (rosae we do not know) will bloom in spring if sown now, but it is not so hardy as many. We intend publishing some notes on annuals, and early-flowering spring plants, for flower-garden decoration shortly.

DEFORMED SALIX SHOOT (F. W.).—The flattened stem, or branch, is not uncommon, and is called by botanists fasciated, or clustered. The cause, like the cause of most abnormal formations, is unexplained. Sir J. E. Smith says it arises from disease or accident, and is frequently observed in the Ash, the Tanus communis, several species of Daphne, Asparagus, &c. In one variety of Pisum, called the Top-knot Pea, this deformity is permanent, and propagated by seed.

CELERY, &c. (Guernsey Blue).—In recent Numbers of this Journal full directions have been given relative to Celery culture and Mushroom-bed-making. "The Garden Manual," which you can have free by post from our office for twenty postage stamps, contains information on these subjects, and all ordinary cultivation required in the kitchen, fruit, and flower garden.

PROPAGATING CENTAUREA ARGENTEA (A New Subscriber).—Take up the plants and pot them in a light turfy loam with a quantity of sand intermixed. Provide perfect drainage, be rather sparing of water, and place them near the glass in a light airy part of a dry greenhouse. Do not reduce the head at all, but retain it and all side shoots. In February place the plants in a house having a temperature of from 55° to 60°, which will encourage the production of side-shoots, and when these have three joints they should be slipped off, or cut off with a sharp knife near the stem, which will leave a kind of heel on the cutting. Insert them in moist sand in a pot or pan, and place in a mild hotbed of from 75° to 80°, putting a bell-glass over them if the atmosphere of the house is dry; but if it is calm and moist the bell-glass may be dispensed with. Keep the sand moist, but avoid moistening the foliage, and be careful not to drown the soil, otherwise the cuttings will damp off. They will root in a fortnight or three weeks and may then be potted; continue them in heat until they become established, then remove them to the greenhouse and gradually harden off prior to planting out, which may be done in June.

PERPETUAL CARNATIONS.—WINTERING GOLDEN CHAIN AND CLOTH OF GOLD GERANIUMS (Agnes).—The Perpetual Carnations are similar to Perpetual Roses. They bloom more or less continuously, especially when grown in pots. It is not usual for them when kept in a greenhouse to continue doing so through the winter. They flower most profusely in summer and autumn. The Geraniums you name should be taken up on the approach of frost, potted, and wintered in a greenhouse. A rather warm, dry, airy, light situation is best. They should have but little water—only sufficient to maintain their vitality. By the faggot-plan we presume is meant tying the plants in bundles like fagots, and that you appear to understand, which is all the information we can give in reference to it.

SELF-INSTRUCTION (A Young Gardener).—London's "Self-Instruction for Young Gardeners" will teach you how to draw simple geometrical figures. If you wish to learn perspective and colouring elevations you must receive a few lessons from some local drawing-master.

NAMES OF FRUIT (A. Middleton).—1, 2, Keswick Codlin; 3, not distinguishable from the specimen sent; 4, Easter Pippin; 5, Blenheim Pippin. Pear too far gone. (J. F. Lambert, Dublin) Apples.—1, 2, Whorle Pippin; 3, Newtown Pippin; 4, Royal Russet. (An Old Subscriber, Peckham) Pears.—1, Gansel's Bergamot; 2, Boursé Dell; 3, Glou Moreau, small; 4, Boursé de Bance. (New Subscriber) Apples.—1, Bedfordshire Foundling; 2, Leam's Pearmain; 3, Birmingham Pippin; 4, Lemon Pippin; 5, Robinson's Pippin; 6, Bock and Sugar; 7, unknown. (Amicus).—Your Peaches are certainly most extraordinary. They are evidently the produce of two distinct ovaries in the same flower, which have become united by close continuity, forming a curious junction. (E. B.) Apples.—1, Gravenstein; 2, Blenheim Pippin; 3, Callini; 4, Duchess of Oldenburg; 5, Christie's Pippin. (J. W. J.)—1, St. Germain Pear. Apples.—2, Hawthornden; 4, Dutch Mignonne; 5, Reinsette du Canada. (T. H. R.)—1, Sylke House Russet; 2, Blenheim Pippin; 4, Hoary Morning; 5, Dumelow's Seedling; 7, Newcomb; 8, Spice Apple; 10, Devonshire Quarrenden; 11, a sort of Oak. Pear.—B. Williams's Bon Chrétien.

NAMES OF PLANTS (F. W. A.).—Your deciduous shrub is Rhus cotinus, or Venice Sumach. (B. S.).—Your plant belongs to neither of the genera you mention, but is Arenaria serpyllifolia. (S. A. P.).—Myrica Gale. (Morphe).—5, Scabellia succisa; 6, Ceanothus infesta; 7, Impatiens noli-medicari; 8, Sedum telephium. (H. K.).—Your Fern is too young and imperfect to be named. The yellow flower is a species of Helianthus, but it is impossible to say which from such a mangled scrap. The other plant is Origanium vivere. The Pear is Summer Franc Real; the Plum, Pond's Seedling. (J. C.).—We cannot tell the name of your Loper plant. It appears to us to be one of the Compositae.

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

POULTRY IN A SMALL ENCLOSURE.

In reply to "A COUNTRY VICAR," we will begin with the old quotation—

"Choose not alone a proper mate,
But proper time to marry."

There are fowls evidently intended by nature for such a place (8 feet by 20) and such purposes as you describe—viz., to live in such a small place, and to produce eggs. No one would try to rear chickens without more run; and no amount of food will make the fibre and muscle, and produce the growth that can only result from exercise. Therefore some breeds are layers only: the hens never sit. Pullets, the first time of laying, will produce their number of eggs, but when they become hens they will not. You may choose Spanish, or Crève Cœur, or La Flèche; they are non-sitters. You may have Cochins or Brahmas; they are very hardy. We would advise you to have Spanish, Brahmas, or Cochins. You must every year save some eggs, and put them under other fowls, to produce April or May chickens. These will

lay in the winter. When they are hens they may be kept as breeders, or sold. If care be taken of all the scraps in a house, and certain waste from the garden, the laying hens should cost little, and cottagers will always rear chickens at a low price. Where everything is bought, and fowls are luxuriously kept all the year, eggs cost one penny each. Where fowls are tended and cared for carefully, eggs should be cheap food.

LEIGH (LANCASHIRE) POULTRY SHOW.

THIS Show took place on Wednesday, the 18th inst., on very suitable grounds adjacent to Leigh, Lancashire; but it is now made evident, that should the Leigh Show progress during the ensuing five years as it has during the same number of years just past, a far more extensive appointment will be compulsory. The fact may be very briefly told. In the northern counties the emulation of the numerous agricultural societies held in those districts has scarcely any bound assigned to it, each exerting itself in the most friendly rivalry to excel its neighbours; consequently, the northern counties have progressed in about the same proportion as those of the southern and eastern districts have, on the contrary, retrograded. The reasons are obvious: in the north the hopes of committees of agricultural societies are the determination to establish a show as good, or even better, than those held around them. All try their best, yet, barring a little customary banter, the most friendly feelings prevail. Necessarily from this cause alone, good well-attended meetings are the almost universal order of the day, the exhibitions being, as a whole, of first-rate character. The people of these districts seem most thoroughly to enjoy them, and we rarely hear, therefore, of non-success. The southern districts of the kingdom unfortunately seem far more supine; committees do not appear to labour as impulsively and willingly together. "The work"—this always may be regarded as a sure test of sincerity or otherwise—at the last devolves exclusively on, perhaps, a tithe of the original projectors; and thus fairly borne down by the excess of responsibilities falling on one, or at best a very few, pairs of shoulders, the attempt is finally abandoned, and thus shows that might have redounded to the credit of a district peculiarly adapted to poultry culture, are of necessity numbered among the by-gones. Why these things should be we feel ourselves at a loss to account, but certain it now is the generality of our best shows are held exclusively in the northern districts. The Committee at Leigh are, beyond dispute, a worthy example of a number of gentlemen bound each by one firm resolve to use the extreme of personal exertions, and never to rest contented save with the undoubted progress of their special undertaking. Here is the great secret of success—they make it "a long pull, a strong pull, and a pull altogether," there are no divisions among them; they thus obtain public favour, and are of necessity well supported.

The weather, of course, has much to do as regards the receipts at the doors, and this year very unfortunately the day was of the most miserable character—one positive cold and drenching rain. That the receipts were seriously lessened by this mishap is beyond doubt; but that the Show far surpassed in general quality those previously held here is equally certain.

Most of the poultry were of high character, though the adult portion of the classes are as yet far from restored to plumage. Cochins were shown in force, and as a whole were very good. The same may be said of the Spanish, Hamburgs, and Game fowls. It was a matter of congratulation, that those classes most esteemed for table purposes were the best represented; and beyond question, we do not expect to meet with either Geese, Turkeys, Rouen or Aylesbury Ducks of better worth at any of our coming shows. The Grey Call Ducks (several pens being shown), were of decidedly first-rate excellence, and some "domesticated Wild Ducks," were also most commendable.

The wants of the poultry during exhibition were well considered, and had the weather been fine the greatest success must have ensued, besides adding many score pounds of admission money to the finances of the Leigh Committee.

Game (Black Red).—First, C. W. Brierley, Rhodes House, Middleton, near Manchester. Second, W. Nunnerley, Market Hall, Warrington. Chickens.

—First, J. Turner, Stand Lane, Ratcliffe. Second, R. Southern, Welsh Hill. Highly Commended, C. P. Ackers, Bickershaw, near Wigan.

GAME (Any other variety).—First, J. Wood, Moat House, Haigh, Wigan. Second, C. W. Brierley, Middleton, near Manchester. *Chickens*.—First, C. P. Ackers (Brown Red). Second, J. Wood. Highly Commended, C. P. Ackers (Duckwing). Commended, J. Wood.

SPANISH.—First, N. Cooke, Atherton. Second, G. H. Evans, Leigh. *Chickens*.—First, J. W. Speakman, Atherton. Second, N. Cooke. Highly Commended, W. Gregory, Atherton.

COCHIN-CHINA (Any colour).—First, J. Elliott, Westcliff Mill. Second, C. W. Brierley. Highly Commended, E. Smith, Middleton, near Manchester. *Chickens*.—First, R. J. Wood, Lower Crumpsall, near Manchester. Second, G. H. Wheeler, Middleton, near Manchester. Highly Commended, J. Nelson, Heaton Mersey, near Manchester; R. J. Wood. Commended, J. Fryer, Liverpool Road, St. Helena.

BRAMA POOTRA (Any colour).—First, E. Leech, Greave House, Rochdale. Second, N. Cooke. *Chickens*.—First, E. Leech. Second, J. Elliott. Highly Commended, N. Cooke.

DORKING (Any colour).—First, S. Farrington, Astley. Second, E. Smith. Highly Commended, J. Bullough, Atherton. *Chickens*.—First, J. Bullough. Second, C. W. Brierley. Highly Commended, J. Fryer.

HAMBURG (Golden-pencilled).—First, J. Turner, Stand Lane, Ratcliffe. Second, no competition. *Chickens*.—First, T. Wrigley, jun., Tonge, Middleton, near Manchester. Second, J. Hazleden, Great Boys, Tyldesley. Highly Commended, J. Hurst, First Lane, Westleigh.

HAMBURG (Silver-pencilled).—First, E. Crompton, Over Hulton. Second, J. Platt, Deane, near Bolton. *Chickens*.—First, J. Platt. Second, E. Crompton.

HAMBURG (Golden-spangled).—First, N. Marlor, Denton, near Manchester. Second, G. Whitaker, Horwich, near Bolton. *Chickens*.—First, N. Marlor. Second, G. Whitaker. Highly Commended, J. Gerrard, Brown Street, Bedford.

HAMBURG (Silver-spangled).—First, J. Hazleden, Great Boys, Tyldesley. Second, J. Wood, Brinscall Hall, Chorley. *Chickens*.—First, J. Hazleden. Second, J. Hurst. Highly Commended, J. Turner, Astley.

POLAND.—First, P. Unsworth, Lowton. Second, S. Farrington, Astley. *Chickens*.—First, H. Smith, jun., Bedford Brewery. Second, P. Unsworth.

POLAND (Any other variety).—First and Second, S. Farrington. *Chickens*.—First and Second, S. Farrington.

GAME BANTAMS (Any variety).—First, G. Green, Back Lane, Westleigh. Second, W. Nunnerley, Market Hall, Warrington. *Chickens*.—First, T. Wakefield, Golborne. Second, H. Kenworthy, Astley.

BANTAMS (Any other variety).—First, C. Walker, West Grove House, Halifax. Second, S. Farrington. Highly Commended, C. W. Brierley, Middleton, near Manchester; J. Mangnall, Adlington, near Chorley. *Chickens*.—First, C. W. Brierley. Second, S. Farrington.

ANY OTHER DISTINCT OR CROSS BREED.—First, C. W. Brierley. Second, J. W. Barlow, Chowbent (Blue Andalusian). Highly Commended, S. Bullough, Howebridge. Commended, J. Gerrard, Brown Street, Bedford. *Chickens*.—First, W. Gillibrand, Tyldesley. Second, no competition.

SINGLE COCKS.

GAME.—First, W. Nunnerley, Market Hall, Warrington. Second, S. Farrington, Astley.

GAME BANTAM.—First, C. W. Brierley. Second, J. Bullough, Atherton.

DUCKS (Aylesbury).—First, E. Leech, Greave House, Rochdale. Second, F. M. Hindle, Bury Road, Haslingden. Highly Commended, F. M. Hindle; E. Leech.

DUCKS (Rouen).—First, E. Leech. Second, J. Nelson, Heaton Mersey, near Manchester. Highly Commended, C. P. Ackers, Bickershaw, near Wigan; J. Bullough, Atherton.

ANY OTHER BREED OR CROSS BREED.—First, J. Bullough. Second, C. P. Ackers. Highly Commended, C. P. Ackers.

GESE (White).—First, J. Southern, Kenyon. Second, L. Walls, West-houghton. *Goslings*.—First, J. Southern. Second, S. Dornin, Swinton. Highly Commended, L. Walls.

GESE (Coloured).—First, E. Leech. Second, J. Southern. Commended, L. Walls. *Goslings*.—First, J. Southern. Second, withheld.

TURKEYS.—First, E. Leech. Second, C. W. Brierley. Commended, G. Jackson, Bedford Lodge; R. Lansdale, Boothstown.

Mr. Hewitt, of Eden Cottage, Sparkbrook, was the sole Judge.

POULTRY JUDGING.

A FEW days ago I attended a local show, at which a very successful exhibitor residing in the same part of the country as the Judge showed largely, and won in almost every instance. Now in many of the classes in which he won, I am not a judge, but as he is usually successful in them I dare say he deserved the prizes awarded to him. In one or two classes, however, in which I have had considerable experience, his birds, though winners, were by far the worst in the class; and here a scene took place which I think ought to be made public, and which fully convinced me of the importance of exhibitors knowing before entering who are going to judge their fowls. In a squabble which took place between the Judge and the partner of a large and successful Game exhibitor, the former charged the latter with having on a previous occasion, when he was going to officiate as judge at the same place, sent him the number of every pen of fowls he had entered, with a request that he would do what he could for him. To this the exhibitor replied that the Judge requested him to send them.

Now, whether the exhibitor sent the numbers to the Judge without being requested or not I do not care to inquire, but

it is certain that at the time the two were on good terms, and the numbers were sent and received without any objection; and this proves that unprincipled men get appointed as judges, and inform their friends, and if their fowls are not known numbers are sent.

Let the names of Judges be published, and depend that those who are disposed to act so unfairly will not do so long; exhibitors will then have the remedy in their own hands, and will, of course, cease sending to shows where they are not likely to meet with fair play, and those that are properly conducted and have good judges will be the only ones patronised. Committees of new shows will then be able to select the best and most popular judges, and one of the greatest objections to poultry shows will be removed.—H.

[Our correspondent is known to us, and he has stated the name of the Judge and of the Show. The Judge ought never to be employed again.]

BEWARE OF THE PIG.

UNTIL last night I was under the impression that pigs and poultry, if not sworn friends, were, at least, amicable companions. Such is not the case. Poultry-keepers, beware of the pig! and read this dismal tale. A valuable Cochin pullet of mine entered the pigstye as usual to peck at piggy's trough—she was devoured at once. Nor is this all. The same pig the next day (no doubt with the feelings of a tiger which has once tasted human flesh) in like manner murders and eats whole a Cochin cock. How is it this pig forgets his former friendship with his victims, and now seems determined to eat every fowl within his reach? The comfort is, he will shortly be converted into portly hams, and long sides of bacon, by his injured master—CHANTI-CLEER.

COMB-PRUNING.

I SHOULD say as a rule, never resort to comb-pruning with the view of rejuvenating old stocks. It is an operation which is likely to do far more harm than good unless performed with very great judgment, and had, therefore, better be altogether let alone. When portions of combs become mouldy or offensive they may, of course, be removed; but even in this case the cure may generally be entrusted to the bees themselves, except when foul brood is present, when an entirely different mode of treatment must be resorted to. Combs will last seven years or more, and I deem it better to break up an old stock at the end of this period than to attempt to renew it by comb-pruning.

The above advice in reply to the question of "C. F. G.," in page 224, refers only to hives in which the combs are fixtures; but with either bar or frame-hives the case is very different, and the renewal of brood-comb presents no difficulty whatever. Just about this time, when breeding has ceased in most colonies, a couple of the worst combs may be removed from the centre of a hive with not less than nine bars or frames, and the remaining combs being brought together so as to leave a vacant space on both sides (where empty frames or bars should be inserted), the stock may remain until the spring, when the vacancies at the sides will in due time be filled up by the bees. If the apiarian have not spare combs wherewith to assist them, care must of course be taken that the remaining combs contain a sufficient supply of food, and that drone-combs be not shifted into the "brood-nest." These should be kept at the sides, and if several are present it will, if possible, be advisable to exchange all but one of them for worker-combs. With hives containing less than nine bars it may be best to proceed more gradually by removing only one comb. In either case the operation should be repeated every autumn until all thickened and worn-out combs are done away with.

Judging from my own experience I should be disposed to refer the destruction of the stock, which "had swarmed and cast this year," to the loss of its young queen, which may have occurred from various causes—as, for instance, an accident during her wedding flight, mistaking her domicile on her return, or a regicidal reception by her worker sisters. Combs in which such numbers of bees as are required to

form two swarms had been recently bred, could scarcely have degenerated so suddenly and completely as to account for the entire destruction of the parent stock.

The full-grown drone with pink eyes was probably hatched from what may be termed a chance drone egg—no very unusual occurrence.—A DEVONSHIRE BEE-KEEPER.

YOUR correspondent "C. F. G." wishes for the opinions of other apianians on the excision or removal of old combs. I shall be happy to give him the results of my own experience. I am convinced that hives, provided they are of good and sufficient internal dimensions, will last much longer than is generally supposed. In 1861 I stocked a number of large ten-framed boxes, chiefly by transferring combs and bees from common cottage-hives. One of these was a swarm of 1857, and the others ranged from that date down to 1860. The original combs, or, at any rate, the majority of them, are still in use, dispersed about my apiary.

In 1858 two straw hives, having flat wooden tops, were tenanted with fine swarms. These hives, known as Nos. 4 and 9, have been among the most remunerative I have ever had. Supers, ranging in weight from 20 lbs. up to 41 lbs., have been afforded by each of these two hives nearly every summer since 1858. One of the hives has, as far as I know, thrown but one, and the other two swarms, during that period. No. 9, after filling a super in the summer, was broken up last autumn, and was full of sealed honey.

Thinking that it might be advisable to change the combs of the other hive, No. 4, I placed under the stock early in the spring a Stewarton-box of beautiful new brood-comb, which had been kept carefully wrapped in paper during the winter. There was full communication, all the spaces between the bars being open. About six weeks afterwards I inspected the interior, hoping to find that the principal part of the breeding had been carried below. On separating the hives I could see that not a single cell in the lower division was occupied by brood, while the upper, which contained the old combs, was crammed with brood down to the bottom. They were replaced just as before, and after another interval of six weeks were again examined. This time there was a small quantity of brood in the lower half, but the majority was still contained in the old combs. Being resolved to wait no longer, I at once drove out the bees from the upper portion, cut out the combs, and placed all the brood in an empty hive on the top of the stock, now reduced to a Stewarton. The brood was in due time hatched out, and these old combs of six years' standing were immediately filled with honey. They have since been removed. I have them still, and they appear as if they would have answered every requisite for years to come. It is also worthy of remark, that, during the entire period, one only of these hives ever had brood in any of the supers, which happened in 1860.

There is another among my hives to which allusion may be made, No. 7, a box adjuster-hive, peopled with a swarm on May 23rd, 1860. In 1861 it threw off two fine swarms, and gave me a large quantity of comb, and 10 lbs. of sealed honey in the super. In the bad year of 1862 it did little more than throw off a swarm. In 1863 I took off from it a beautiful super of 30 lbs.; and this year, 1864, it has filled one of about 40 lbs. The stock-hive is very populous, and I see no reason why it should not thrive for a time longer.

With small-sized common hives there might be more reason to fear the central combs becoming, from age, unfit for breeding purposes, owing to their being comparatively more used, and from the quantity of pollen necessarily stored in them. Had I now such a hive, I should wait for a swarm in the natural course, three weeks after which I should drive out the bees, and break up the stock. If excision of a portion of the combs be resolved upon, it is, as "C. F. G." remarks, of little use cutting out only the side combs. The best time to remove one or two of the centre combs is late in the autumn, after the brood has been all hatched out. The honey may be returned to the bees, and a little feeding may induce comb-building; but if not, the space left between the combs seems to be of little or no injury to the bees, as they will hang there in a dense cluster, thus defying the cold. With frame-hives the renewal of combs becomes a matter of the greatest ease and certainty, which may be carried out at any time. Those who use

these hives scientifically are constantly, during the working season, compelling their bees to make new combs. I frequently slip in a frame of new and clean worker-comb between old combs. This is generally at once taken possession of by the queen, and filled with eggs. "C. F. G." is in error in supposing brood to be so easily chilled. No one would fix on a very cold day in early spring for the operation. In fact I think early spring to be the very worst time that excision, pruning, or removal and substitution of combs, can be carried out. With bar-hives in spring there would be no objection to transposing the outer and the central combs, provided the outer combs were worker and not drone-celled, and that the central combs did not contain any brood, for that would almost certainly become abortive. But it is a plan not to be recommended, to say the least of it.

In conclusion, I may state that for some years of my early apianian career I was troubled with the bugbear of old and worn-out combs. With increased experience the causes of apprehension seem marvellously lessened. In both the cases of the hives I have alluded to, I believe the somewhat declining prosperity of the hives to have been due more to the age of the queens than to the age of the combs.

This has been with me a better honey season than the last; but into this I must not now enter, as I intend to relate the results of this year's doings in a separate paper.—S. BEVAN FOX, *Exeter*.

RUIN OF A NEWLY-PURCHASED STOCK.

I PURCHASED an old stock-hive about a month since with the assurance that it was a swarm of last year. Can you tell me from the comb I send you if such be the case? Since I have had it I have been surprised to find that the bees have not worked, but have loitered about the alighting-board cleaning each other, although the bees in my other hives are still busy collecting. On the evening of the 7th inst. I took the hive, which is of straw, off the floorboard for the purpose of substituting a clean one. I found the combs black in appearance, but by the little light that there was I failed to discover many bees. Yesterday, on going to look at them, I found that the hive was being robbed by bees from another shed half a dozen yards distant. In the evening I again turned up the hive, the few bees within escaping. I found the combs nearly empty. The hive when I purchased it weighed with the floorboard about 25 lbs. The weight of the floorboard is about 2½ lbs., and of the hive in its present state with nearly empty combs, 12 lbs., so that when I bought it there could have been only about 10 lbs. of bees and food. Probably the queen was dead. Around the edges of the hive, both inside and out where it was sealed to the board, were a great number of white envelopes, each containing a maggot: do these belong to the honey-moth tribe? Will the combs be of any use to swarms in the spring? When should clean floorboards be given? and when and how should stocks be united?—A NOVICE.

[Judging from the appearance of the piece of comb which accompanied your letter, we should say that the age of the stock was correctly stated. Your idea respecting the probable loss of the queen we believe to be right, but the vendor may have known nothing of it, as some of its original inhabitants were probably in possession a month ago. The maggots around the skirts of the hive were doubtless the larvæ of some kind of wax moth. We deem the combs rather too old to be given to a swarm. Floorboards should be changed before winter sets in, and in the spring. Mr. Woodbury's articles on driving and uniting bees in Nos. 139 and 144 of THE JOURNAL OF HORTICULTURE will give you the information you require as to the best mode of uniting stocks.]

A FRIEND MISTAKEN FOR AN ENEMY.

AN apianian friend of mine has informed me of an alarming affliction which befell the apiary of a lady of his acquaintance. This lady one day paid a visit to her bees, and was greatly alarmed at seeing one of her hives invaded by a large number of monstrous bees, which were evidently quite masters of the poor honey bees, as they went in and out without hindrance. Not relishing the aspect of affairs, and,

perhaps, fearing that the depredations of the miscreants might be extended to her other hives, she determined to consign this one stock, interlopers and all, to the brimstone-pit without delay. The work of destruction was successfully performed, and the legitimate inmates of the hive, together with their invaders, were consigned to a common death. A few of the latter were carefully collected, and sent in triumph to my friend, who was asked to pronounce his opinion as to what these depredators could really be. He found—listen all apiarians who dread the appearance of any new enemy or scourge in your apiaries! he found these terrible enemies were nothing less than the ordinary male bees or drones, and that the too-careful owner had sacrificed her best and most prosperous colony.—S. BEVAN FOX, *Exeter*.

ARE BEES OMNIVOROUS?

YOUR article from "RUBY," in the Number for the 6th inst., is, I am afraid, likely to mislead new beginners, as bees do not generally sting when swarming, and it is strange his bees do not frequent the borage, as this is considered one of the best bee flowers. My Ligurians were working on it till 7 p.m., the other day, and the plant is generally frequented so much that the country people say they are like swarming, and, therefore, I intend next year to plant a larger extent of it.

You certainly do not mean to say that bees are carnivorous, and I cannot believe that they either eat the bird or the Chinaman's fowl. I believe they would carry out all the flesh from the bones that they could, but not eat it. This story is something like giving Pigeons a salt cat, and as a Welsh correspondent some time since stated, their consuming moist sugar given as you get it from the shop, whereas it is very little of it that they consume, but they carry it out. I might as well state they eat oats, as I put a quantity into the feeder to prevent them drowning, and was rather surprised the next evening to find nearly all the oats gone, and, therefore, the next day I watched them, and was amused to see them very busy bringing the oats out; as they could not carry these sideways they took hold of the thinnest end, and as they came out looked as if they had a long proboscis.

You had better advise "RUBY" to procure Ligurian bees, as they do not sting so much as the black bees, and I can confirm the statement that they gather from red clover after it has been once cut.—A. W.

[Although bees are usually very peaceable when swarming, we regret to say that we speak *feelingly* when we state that even Ligurians will occasionally transgress the strict rule of politeness on these occasions, and we cannot, therefore, feel surprised at a lady declining to run any risk. We have certainly always found bees constant in their attentions to borage when in bloom; but we scarcely know what to say with regard to the carnivorous, or rather omnivorous, propensities attributed to them. We ourselves saw what we doubt not was fruit juice, stored in their cells on one occasion, and we have now before us a letter from the most distinguished hymenopterist in the kingdom, in which he says he has recently observed what to him was "an unusual phase in the habits of the hive bee—a number of bees regaling themselves on the moisture of a putrid bird. The bird had been cut or torn open, was in a state of advanced decay, and a little rain had moistened the stinking mass. On this fluid the bees were regaling themselves." However absurd it may at first sight appear, the fact that bees will pick the bones of small birds when prepared and presented to them in the manner described by "RUBY," is attested by too many witnesses to be entirely discredited. What becomes of the flesh of the poor little biped under these circumstances is rather a puzzling question, but is one that could be readily solved by experiment, if "R. S.," or any other of our scientific and observing apiarian correspondents, would take the matter in hand.]

"TANGING" SWARMS.

ALTHOUGH the general custom which prevails among country bee-keepers of beating some instrument for the

purpose of inducing bees to settle more quickly, has been violently assailed and condemned by various authors, yet I am by no means convinced that the system of "tanging" is so utterly useless as they would have us believe. Two instances have been related to me which occurred this summer. A labourer was at work in a field, and observing a swarm flying across overhead, he began tanging on some implement, and the bees immediately came down and settled on some docks at his feet, where they remained until he went to the village for a hive. Another man was at work in his garden, when seeing a swarm going away at a great rate, he rapped sonorously on his spade, the bees came straight down, and commenced settling on his person. He was obliged to run for it, to the shelter of a tree. The whole swarm followed him, and clustered on the branches, from which they were hived.

I have proved that the report of a gun will bring down a fly-away swarm. Many years ago I hived a large swarm in a unicorn-hive. At twelve o'clock on the following day the bees suddenly rushed out of the hive, and mounted over some very high trees growing on the old city wall and embankment which separate my garden from that of the bishop's palace. The bees settled in a low bush about fifty yards off from where they started. They were secured and placed in a different hive, and seemed quite contented; but the following day also about, twelve o'clock, they again left the hive, and pitched high up among the branches of one of the trees. With great difficulty I brought the swarm down by sawing off a branch, and the bees were hived as before. Fearing they would play me the same trick, I thought of trying the effect of firing a gun, and I was curious to observe the result. Loading my gun with a heavy charge of powder, and placing it within reach, I waited for the next exodus, and it came as I expected, about ten o'clock the following morning, when I happened to be in the garden. A sudden well-known rush and roar, and the air was filled with bees, which gradually massed nearer together, and mounting higher and higher, were already on the point of disappearing over the tops of the trees when I fired. In an instant, quicker than I could have believed possible, down came the entire swarm, and settled within three yards of where I was standing. I suspect in this instance that the violent concussion of the air produced the result, and in tanging, it is probable, that if productive of any effect at all, it is the vibration of the air to which that is to be attributed.

Several other instances have occurred in the course of my apiarian career in which the old-fashioned practice of tanging has appeared to have been instrumental in causing swarms to settle quickly, and it seems to me, that after all that has been written and said against the practice, there really is some good ground for the popular idea concerning it.—S. BEVAN FOX, *Exeter*.

OUR LETTER BOX.

MARKING FOWLS (Fair Play).—Marking with a string or wire round the leg is the mode adopted where Ducks run together in Buckinghamshire, or Turkeys in Cambridgeshire. It is far more effectual to mark in the web of the wing, either with a piece of coloured worsted, or to burn holes with a hot knitting needle. We prefer the latter method, as the marks are never obliterated. They be made thus—

COLOUR OF COCHIN LEGS (Exhibitor).—The legs of all Cochins should be yellow, but there is with them in age a certain change, as becoming grey with the human being. Nothing would excuse blue or green legs, but practised judges and breeders will not look for bright yellow in adults. As well might you expect the bloom and freshness of twenty on the cheek that has been visited by the winds of heaven for fifty years. In fowls, as men, age is the gradual wearing out of vitality, and it shows itself not only in loss of vigour, but the freshness of colour also fades. You must also bear in mind that in all adults this is the season of moulting. All strength and vigour are devoted to the reproduction of plumage—every external is dead or dying. It will help you if we repeat, birds of the year must have yellow legs. There is latitude for adults.

TREATMENT OF A WEAK SWARM (W. J. P.).—If the bees in the strayed swarm are tolerably numerous, all that is necessary is to feed them liberally, and this should be done at once. The best mode of administering the necessary amount of food is by means of an inverted pint bottle, the mouth of which should be tied over with a bit of cap-net, or open canvas, such as is used for wool work, and inverted through an opening in the top of the hive. This bottle should be filled every evening until the nett contents of the hive reach at least 15 lbs.

HOWEY DARK-COLOURED (Leighton B.).—The dark colour of your honey this year is owing to some peculiarity of the season, and its effects upon the pasturage. It does not arise from any fault or disease in the bees themselves, nor are you by any means the only one to complain.

WEEKLY CALENDAR.

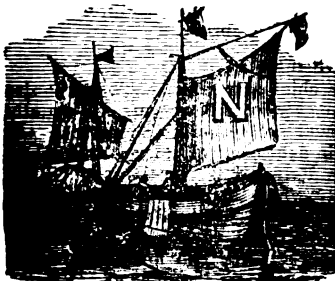
Day of Month	Day of Week	SEPT. 27—OCT. 3, 1864.	Average Temperature near London.			Rain in last 37 years.	Sun. Rise.	Sun. Sets.	Moon Rise.	Moon Sets.	Moon's Age.	Clock after Sun.	Day of Year.
			Day.	Night.	Mean.	Days.	m. h.	m. h.	m. h.	m. h.		m. a.	
27	Tu	Ivy flowers.	65.2	45.3	55.2	22	56 45	46 45	22 2	5 4	26	9 11	271
28	W	Birch turns yellow.	64.6	44.8	54.7	23	56 5	47 5	26 3	5 4	27	9 31	272
29	Th	Macassar Day.	65.8	44.9	55.1	24	6 6	41 5	28 4	4 4	28	9 51	273
30	F	Beech turns yellow.	64.9	43.5	54.2	25	1 6	39 5	32 5	9 5	29	10 10	274
1	S	Horse Chestnut leaves fall.	63.6	43.1	54.3	19	3 6	36 3	37 6	32 5	30	10 29	275
2	Sun	19 SUNDAY AFTER TRINITY.	64.6	44.0	54.3	18	5 6	34 5	41 7	27 5	31	10 48	276
3	M	Walnut leaves fall.	63.9	44.2	54.1	16	6 6	32 5	47 6	26 6	3	11 6	277

From observations taken near London during the last thirty-seven years, the average day temperature of the week is 64.6°, and its night temperature 44.5°. The greatest heat was 79° on the 27th, 1859; and the lowest cold, 17°, on the 2nd, 1855. The greatest fall of rain was 1.01 inch.

BULBS.

(Continued from page 229.)

THE NARCISSUS.



EXT to the Hyacinth in point of excellence stands the Narcissus. It requires precisely the same treatment as the Hyacinth, except in two particulars—viz., requiring rather larger pots, and potting right up to the neck. A six-inch or 24-sized pot is the most

suitable for single, and 18's for treble bulbs.

The best sorts are—

- Bazleman major, white, with yellow cup. This is a good forer, and deliciously perfumed; to my thinking, the best of the Narcissuses.
- Double Roman, white. Worthless as usually sent out; but when true, a useful, very early kind.
- Grand Monarque, white, with yellow cup; very fine.
- States General, creamy white, with yellow cup.
- Muscat Orientalis, white, with yellow cup, edged with crimson; novel.
- Grand Primo, white, with citron cup.
- Soleil d'Or, yellow, with orange cup.
- Perles Blanches, pure white; fine. Perles d'Amour of some.
- Gloriosa, white, with orange cup.
- King of the Netherlands (Queen of some), white, with citron cup.

TULIPS.

Very few flowers exceed the brilliancy of colour and the exquisite forms of the early single and double Tulips. The Duc Van Thols bloom about a fortnight earlier than Hyacinths; whilst such kinds as Pottebakker, than which nothing can be more beautiful when in bud and on the point of bursting into flower, bloom at the same time as the Hyacinth.

The varieties are so very numerous that I cannot but give a few of such as I have found the best.

SINGLE TULIPS.

- Duc Van Thol, red and yellow; useful on account of its earliness.
- Scarlet, the best of the Van Thols; very beautiful.
- Pottebakker, white; quite charming.
- Yellow; good, when not grown in too strong a heat.
- Red Striped; fine.
- Proserpine, velvety rose; a beautiful Tulip, blooming early.
- Superintendent, white and violet; a good very early kind.
- Vermilion Brilliant, glowing scarlet; very fine.
- Keizerkroon, golden yellow and red; fine.
- Florentine, a yellow, sweet-scented sort, rather out of the common way.
- Molière, purple, yellow base; beautiful.
- Globe de Rigaud, violet and white; large and fine.

The above are the best for early forcing; but the

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following are charming when brought on in a cool house, and make an indispensable show in March—

Grand Duc, bright yellow and crimson; very fine.

Roi Pepin, white, crimson flake; one of the best.

Theba, rose and white; good, but surpassed by Duc de Claremond.

Florida, purplish violet.

Fabiola, rosy violet and white; very beautiful.

Rose Luisante, rosy crimson, peach edges; quite charming.

Cottage Maid, rosy pink, bordered with clear white; very pretty.

Berangaria, purplish mauve.

Cramoisie Superbe, crimson.

Bruid van Haarlem, white and red striped.

Lac van Rhyn, violet crimson, white edge, variegated foliage; novel.

DOUBLE TULIPS.

Of double Tulips, which are as yet far short of the standard both in point of numbers and quality, we find—Tournesol, red and yellow; the finest Tulip in cultivation for forcing and general decorative purposes, and a good companion is found in Yellow Tournesol.

Duc Van Thol, red and yellow; well known.

Imperator, crimson; fine.

Bex Rubrorum, bright red.

Gloria Solis, brownish crimson, yellow-edged.

Only half a dozen sorts of double early Tulips! Depend upon it we shall have no more unless growers ask for more good double and fewer single Tulips, which live but a very short time, and are succeeded by others whose only recommendation is novelty.

The soil recommended for Hyacinths suits early Tulips perfectly. The bulbs for early blooming should be potted from the middle of September, and not later than the middle of October; and those required to bloom, say at Christmas, should be potted early in September if possible, the best for that purpose being Duc Van Thols and Pottebakkers. Providing efficient drainage, pot them three in a four-inch pot, five of the early (those for early forcing), in a 24, or if not wanted to bloom before March, in 18's, placing the bulbs deep enough in the soil to be just covered. After potting give a good watering, and plunge in coal ashes or spent tan not deeper than is sufficient to hide the pots, the bottom on which the ashes are placed having been made impervious to worms. The pots should remain there for a month or six weeks (not longer), and be protected from heavy dashing rains and frost, but fully exposed at other times. After this wash the pots, clean the surface soil, and place in a cool house from which frost is merely excluded, keeping them near the glass, fresh air being admitted whenever the thermometer is above 32°. Tulips cannot have too much light and air. Under glass they will require watering occasionally, for the soil should never be allowed to become too dry, and a good supply should be given when necessary. Kept in this way they will bloom in March; but when an early bloom is desired some of them should be introduced into a house with a night temperature of 50°, and treated in precisely the same way as advised for Hyacinths, keeping them in heat until the flower is

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visible, when they should be removed to a house with a temperature of from 45° to 50°. In this stage advantage may be taken to apply liquid manure at every alternate watering, which will improve the substance of petal, and I think the colours are brighter. Care, however, should be taken not to apply it too strong. I find fresh cow and sheep-dung, a peck of each put in about 70 gallons of rain water, make a liquid quite strong enough for the Tulip. At other times the Tulip should be supplied with clear water only; and it should be borne in mind that liquid manure will not do any good unless the plants receive fresh air, and all the light practicable by close proximity to the glass, which is the secret in growing large flowers on short stout footstalks, and in giving brilliancy of colour. In a strong heat and at a distance from the glass they become drawn, and are incapable of supporting the blooms, and staking them to keep the head erect is anything but sightly.

CROCUSES.

I was much pleased at seeing a lovely Crocus to-day (September 9th) peeping from its lowly bed. I will say something about autumn-flowering Crocuses in due time; but at present I will treat of those most suitable for growing in pots, sand, &c., and in water.

Prince Albert, purple; pure and decided.	New Giant Yellow, a splendid yellow
Queen Victoria, pure white.	Grande Vidette, fine blue.
No Plus Ultra, large blue. A great advance.	Sir Walter Scott, large; white and blue striped.
La Majestueuse, large; striped.	Versicolor, striped.
Bride of Lammermoor, striped.	Maria Stuart, white.
Albion, immense blooms; white and blue striped.	Lord Byron, bright blue.
David Rizzio, dark purple.	Elfrida, white.
	Bride of Abydos, pure white.
	Lilaceous superbus, a good lilac.

Crocuses like the same soil as Hyacinths, and should be potted five in a six-inch pot, placing them about half an inch below the surface, and plunging the pots in the same manner as directed for early Tulips. They are to remain plunged until the foliage appears above the plunging material, when the pots are to be freed of dirt, and placed in a cold frame, protection being given from frost and heavy rains, but full exposure at other times. Keep the pots there until the beginning of December, when they may be placed on a shelf in the greenhouse, where abundance of air should be afforded; and if kept well supplied with water the bulbs will bloom finely in due time, usually about a month before those in the open ground.

If required to bloom at Christmas, Crocuses should be removed from the plunging material by the 1st of November, and be placed on a shelf in a cool greenhouse, as close to the glass as possible without actually touching it; and if fresh air pass over them continually they will show how grateful it is to them by the thickness of the rising bud and the shortness of the foliage. In the last week in November remove them to a warm greenhouse, with a night temperature of 45°, taking care to avoid the usual causes of blindness—viz., great distance from the glass or light, and a high temperature with but little air. Water freely, but not until it is wanted, and in a fortnight or so place in a temperature of 50°, and supply with weak liquid manure, affording them a light and airy situation. Nothing is so pernicious to the Crocus as confined air with a strong heat. When highly excited the flowers perish in the sheath, and the foliage grows at a rapid rate. If the pots are removed to a house with a temperature of from 40° to 45° when the blooms are about half expanded, these will last much longer in beauty.

For growing in glasses select the largest and most healthy-looking bulbs. Place a lump of charcoal about the size of a walnut in the glass, and fill up the glass to within a very little of the base of the bulb with rain or pond water. Set the glasses in a cool dark place for a month, and then expose to light. The most suitable position is the window of a cool room facing the south, placing them quite close to the glass, and where a little fresh air can be admitted in mild weather. The glass should be kept filled to within half an inch of the base of the bulb as the water is exhausted by the plant or evaporates, letting it remain in the room twenty-four hours before it is put into the glasses. With this treatment the bulbs will bloom well, but by no means equal to those in soil. If kept in a warm room in a dark place, at a distance from the glass, and without air, they will not bloom at all, but produce an exuberant mass of foliage. Crocuses in

water are not adapted for forcing, but should be allowed to bloom gradually, the heat of a living-room or sitting-room being quite warm enough; and even there they must be kept near the glass and be turned round daily, placing opposite points to the light, or they will become one-sided.

To grow Crocuses in moss or sand in the form of pyramids, and in a variety of vessels, place a layer of moss at the bottom of the vessel, and fill it to within an inch of the intended surface with sand, if this is the material to be employed, or fill with moss, pressing it tightly; then place the bulbs about 2 inches apart on the surface, and just cover them with sand or moss as the case may be. Give a good watering, and set in a cool place. When the buds appear remove to a cool window, watering them occasionally so as to keep the soil thoroughly moist. Kept in a light, airy, cool situation, they will bloom in due time; and whatever heat they are subjected to it must be given gradually, for the Crocus of all bulbs is the most impatient of forcing. The essentials to success are close proximity to the glass, fresh air daily, pots full of roots, and a temperature not exceeding 50° by fire heat. For early blooming they should be potted early in September; and for succession, generally at intervals of a fortnight until November.

JONQUILS.

Their fragrance is their chief attraction. They require the same treatment as other kinds of Narcissus. I usually place five bulbs in an 18-sized pot, covering them with soil to the neck, placing them in ashes out of doors, and otherwise treating them as the Polyanthus Narcissus. Unless the blooms are wanted early, when they should be forwarded as recommended for Hyacinths, it is not advisable to force them much before the days lengthen, otherwise the foliage is long and the flower-stems weak. The large double do very well in water in Crocus-glasses, if afforded the same treatment as Hyacinths. The single are very sweet, and admirably adapted for pot culture.

THE SNOWDROP.

This is occasionally forced, but it comes in at such an early period naturally, as to leave little to be desired or gained by doing so. Where they are desired, some strong bulbs should be taken from the open ground, potted early in August, and plunged in coal ashes in a cold frame. In November remove to a cool greenhouse, and place on a shelf near the glass, where they will need copious supplies of water, and air on all favourable occasions. They should not be introduced into a temperature exceeding 45° until the flower-buds show. Any description of loamy soil suits them.

IRIS.

Of these the most suitable are the Peacock Iris (*Iris pavonia*), and the Persian Iris (*Iris persica*). *Iris susiana* is very distinct. They should be planted early, three to five in the size of pot large enough to hold them without touching each other. Having filled the pot three parts full put in the roots, cover with soil to within half an inch of the rim of the pot, and place in a cold frame. It is desirable to have the soil in a moist state, so that no water may be necessary until the growth appears. They should be protected from frost and heavy rains. If required to bloom early they may be removed to a cool, light, airy situation in the greenhouse. They are rather impatient of heat, and will only endure a moderate amount of forcing. They should be watered rather sparingly at first, increasing the quantity with the increased growth of foliage. The heat of a warm greenhouse is sufficient forcing at any time, and this should not be given until the foliage is somewhat advanced, and it must then be accompanied with abundance of fresh air.

IXIAS AND SPARAXIS.

The soil most suitable for these is light turfy loam one-half, leaf mould one-fourth, and peat one-fourth, with a free admixture of sand. Drain a 24-sized or six-inch pot to one-third its depth, and then fill with compost, placing five roots about 1 inch below the surface. Place in a cold frame, protecting from frost and heavy rains until the pots are filled with roots, when they may be set on shelves in the greenhouse, water being duly supplied, air admitted daily, and no more heat given than is necessary to exclude frost. Water freely as the plants advance towards a flowering

state, but when the blooming is over gradually reduce the supply, and when the foliage is quite gone remove to a dry place until the time of repotting, which is the latter part of September or beginning of October. They should not be disturbed, for by keeping them in the soil when at rest they retain their firmness much better, and flower much more vigorously. In potting the balls of earth should be carefully broken, and the old soil and offsets removed.

There are many more bulbs that are worth cultivating, but these are not such as are usually purchased annually, and grown in pots or otherwise for winter decoration. I shall continue to treat of many others occasionally in future Numbers, but must at present defer any remarks on them, giving preference to those bulbs and plants employed for the decoration of the flower garden in the early spring and summer months.

G. ABBEY.

MY ORCHARD-HOUSE.—No. 10.

"In terrum (*sic*) over mortals." So says Mr. Spurgeon in one of his sermons, and so may amateurs say of these papers, which already number ten. Judging, however, from the communications received the interest is not quite abated; and here let me continue the list of a few fruits which were omitted in my last paper. This part of the subject seems to me of the utmost value; because, if orchard-houses do really gradually advance the period of maturity in fruits, this is a great advantage. I am satisfied, however, that this ordinarily takes place after the lapse of a few seasons—that is, that the trees take a certain time to accommodate themselves to their new conditions of life: therefore, it would not be proper to look for this in houses newly stocked. To give an example. The De Milan Apricot was, when I first had it, only ripe in the beginning of August. This was seven or eight years ago. It then by being continually placed in the very warmest part of a warm but unheated lean-to, enjoying the advantages of long and mild autumns, and of moderately cold winters, and being closely summer-pruned, which Mr. Rivers says is one cause of his success with Apricots—it then rapidly advanced through July, till it has reached the 20th of June, ripening at that date. I have not heard of anything so early in England or in these islands. But this is the only one which is so early, though De Coulange, an excellent kind, is only a week later and more prolific. We have not here Mr. Rivers's earliest kinds, De Sardaigne and D'Oulins, and cannot, therefore, compare them under the same conditions.

The Kaisha Apricot, on the other hand, has not done well with us. I have only one tree of it, which is a large espalier. It is stationary, and ripened on the 30th of July; Peach Apricot on the 16th of July. All our really valuable kinds are ripe in July. When August comes the open walls furnish us with Royal George (the best grown in the islands), Grosse Mignonne, a few Red Magdalen, and still fewer late Peaches; but here, as in England, these must be uncertain. Why not confine ourselves to early and free-growing sorts when there is any doubt about it?

As to Nectarines, here they are not much grown, for the excellent reason that they rarely ripen. They will not succeed in low sandy peat districts here, which suit Apricots pretty well in good years, and these districts are in the very warmest parts of the islands, and produce early Potatoes from two to three weeks before the upper ground.

Out-door Grapes are a failure. Figs ripen well. Standard Pears succeed if hardy sorts, and only free-bearing are selected. Our best Pears, such as Chaumontel and Beurré Superfin, are invariably grown on walls with a good aspect. Plums do well, but then, in these as in most fruits, only the well-known kinds are cultivated. Apples do very well generally. Thus much to show our climate. Jersey, however, has a higher summer temperature, our island being more enveloped in clouds, and is better adapted for fruit culture. The orchard-houses built and building ought to do remarkably well there. I am afraid, as here, that gardeners able to work them are wanting.

In the orchard-house, then, the July Peaches and Nectarines and the June Apricots are of great value, especially if they continue to advance. We thus compete with heated houses in England, and out-door fruit from Lisbon and

Algiers. But the August fruits in the house, except the very early ones in that month, though most valuable as succession for home consumption, rapidly decline in market value. Having these on the open wall we exclude them from the house. This may prove an error, because if a Royal George could, by acclimatising itself to the house temperature, gradually become a July Peach, without losing size or colour, it would be much esteemed by our critical friends the dealers—*i.e.*, they would find a public ready to appreciate their efforts to please.

The September Peaches in the house are of very little importance, even for home use. At that time the novelty of Peach consumption is somewhat dulled, and Plums out of doors, besides Grapes from the vineries, seriously compete with Peaches then. One of the best of our September Peaches is Shanghae; it is large, well coloured, and sweet. It was ripe on the 10th of September this year, last year on the 11th, and the year before on the 16th. In time it will be valueless to me, and become a late August Peach, just contemporary with the main crop of Grosse Mignonne. Admirable Jaune, that staple of the Angers market, is not easy to ripen without being woolly. It is an October Peach at Angers, but here was ripe on the 12th, 10th, 10th, and 5th of September, during the last four years. Next year it may be a worthless August Peach.

But the fact remains that orchard-houses, after being worked a few years, will generally advance the ripening of fruits. The best kinds appear to gain the most. We may also reasonably hope that no fruit so advanced will recede; none of mine have, out of seventy varieties, and from one to twelve of each variety. No doubt it would be best that tropical fruits, and very delicate sorts of American Plums, Cherries, and Apples should pass a season or two in some intermediate orchard-house in a warm climate before being generally tried in England. A part of our house is planned for a promenade. This is cheap to construct, warm and dry for the feet, and adds to the general warmth of the house.

All our trees have been top-dressed since the middle of September. Most of them are pruned. Some have been changed into larger pots, and unless this is carefully done the check to the vitality of the tree is evident. We also allowed, during cloudy weather, the roots of trees from which the exhausted soil had been removed, to remain without renewing the soil for some days. The object was to hasten their rest; but it is a hazardous operation. I am sure, however, that if one portion of the tree has become disproportionately larger than the other portion, to bare the roots of that side for some time at this season would tend a little to check growth.

Now is the time to begin to prune the trees; but not all at once. Begin with removing, with sharp scissors, the dead shoots; then those drying up; then straggling shoots; then those bearing too far from the leaders. After this cut out the sturdy shoots, often not half ripe, and often tending inward; then shorten the bearing shoots, generally to a triple bud. Open the centres, shorten the leaders, but not at once. Leave something for the spring. The forms of the trees are very important considerations for future notice; also the arrangement and classification of the sorts, so as to save room.

Being about to re-arrange the front ventilators, which swing on central pivots, I should be thankful for suggestions as to the best and cheapest way of effecting this. These hints might be recorded for the benefit of others, and so all would gain. — T. COLLINGS BRÉHAUT, *Richmond House, Guernsey.*

REFORCING STRAWBERRY PLANTS.

HAVING forced some Keens' Seedling Strawberry plants this season, and very few of them having had fruit on them, will you say if these plants will do to force again? They have been outside since June. They are in No. 12-pots, and are full of foliage.—A CONSTANT SUBSCRIBER.

[If your Strawberry plants that did little good this season, and are in 12-sized pots, now full of fine foliage, have been full in the sun since June, and the pots are full of roots right through, making the ball as firm pretty well as a Dutch cheese, and you lay them on their broadside by the end of the month to stop growth, then we think you will

get plenty of fruit the next spring. If your plants, now full of foliage in these tremendous pots, have been kept partly or wholly in a shady place, then we would expect to have more fruit from our little compact plants in what are called 40-sized pots—that is, between 48's and 32's. There is a great fallacy in supposing that mere size of pots and luxuriance of foliage will yield so much fruit in forcing.]

ORCHARD-HOUSES VERSUS WALLS.

SOMETIMES at a friend's house I get a look at your interesting paper, and during the last few months I observed that a controversy was going on respecting orchard-houses, and it appeared to me that the defenders of the orchard-house system, from some cause or other, did not make a very good defence. I felt very much inclined to enter into the battle, but I was much engaged, and in addition to this, I wished to have the results of another year's trial to strengthen me in my opinions. What those opinions are I will state presently.

I think I gathered from some of the letters which I read, that walls were far preferable to orchard-houses, and that better fruit could be obtained from a wall than from an orchard-house. My own experience is directly opposed to this, and I now have the results of two horticultural shows to back up my own previously-formed opinion. Remember, I do not say that good fruit cannot be grown on a wall, I know it can; but I maintain that, as a rule, an orchard-house will produce handsomer and better-flavoured Peaches and Nectarines than a wall.

Mr. Rivers has been a great benefactor to the public, and speaking for myself I can candidly confess that he has opened out to me a most delightful amusement. The only thing I blame him for, is for not strictly limiting the fruit to be grown on the trees in 11 or 13-inch pots to a dozen and a half at the very utmost. I consider that the following sentence has done more harm to the system than anything that ever was written by an opponent: "The third year a tree, if it has prospered, will be able to bring three dozen to maturity; it is, however, better to have a few finely-grown fruit than many that are small." What errors have those few words led me into! How I have overcropped! and there are hundreds of other persons still doing the same, and growing a lot of small, trumpery fruit, far inferior to wall fruit, and scarcely fit to eat, and it is no wonder that it should be boldly stated that walls will beat orchard-houses.

I do not like being egotistical, but to make my letter say what I want it to say, I must speak chiefly of my own experience. Six or seven years ago I knew nothing of fruit trees, I did not even understand that a Peach tree always bore on the new wood. I was ignorant of everything. I bought Mr. Rivers's book; I built a small orchard-house; I potted, pruned, syringed, and watered my own trees, and this year I have ended my season by taking five out of eight prizes at a horticultural show held in a town justly celebrated for its fruit. Half the first prizes went to the wall fruit, the other half to orchard-house fruit; all the second prizes to orchard-house fruit.

Again, I attended another show a few weeks ago, and there out of the four prizes for Peaches and Nectarines, only one went to out-door fruit, the other three to orchard-house fruit. Going back to last year, all the prizes at a show at which I was present went to orchard-house fruit, with the exception of one which was taken by a dish grown on a trellis in a regular Peach-house. Thus you see that my own experience and observation convince me that better fruit can be grown in an orchard-house than on a wall. I mean speaking generally. Of course, wall fruit will sometimes be very fine and good, but with proper cultivation, orchard-house fruit must be good.

I will just relate what happened to me at the show to which I first alluded. I was placing my fruit on the table, and a gentleman near me asked me where I had grown it. I said in a rough-boarded orchard-house. "Well, then," he replied, "they are of no use. I tried to grow some, but could get nothing worth having." "Well," I said, "if you did not, it must have been your own fault." Holding up a dish of beautiful Peaches the gentleman said, "These will beat yours;" but, he added, "They will all be tasted, and the best

will win." Returning to the show in the afternoon, I found that I had beaten my friend, but I was in turn beaten by a splendid dish of out-door fruit. Still I took one first prize for Nectarines, and all the second prizes. In fact, no less than five out of eight prizes went to fruit grown in my little, rough, twenty-feet orchard-house.

The simple reason why people do not succeed with orchard-houses is that they overcrop, and do not give enough air and water. Let it be plainly stated, that a small tree three or four years old ought not to have more than ten fruit on it, and never more than two dozen, and we shall hear no more about orchard-house fruit being inferior to wall fruit. I will admit that a tree will grow three or even four dozen fruit, but it must be of inferior flavour, and the tree will refuse to do anything during the next year. I could write a good deal more on the subject, but I must not take up any more of your valuable space.—A POOR GENTLEMAN.

EXHIBITING GLADIOLI.

AN observation made by your reporter concerning the stands of Gladioli exhibited by Mr. Kelway at the Crystal Palace induces me to say a few words on this mooted question, which resolves itself into these points—Are they to be exhibited with any foliage? and if so, with what kind?

I have seen them shown with their own leaves, with fronds of Fern, with Canna leaves, and with Yucca leaves. Of all these I think their own leaves the most effective; but then it is objected that this gives an unnatural idea of the habit of the plant, as if its flower were produced amongst the leaves instead of being thrown well above them, as we know them to be.

This is true enough; but still, as everybody knows how they do grow it is not a very valid objection.

Fern leaves and Canna leaves with Gladioli flowers are failures, and Yucca leaves worse still. They are unfair, and for this reason: There are, it is well known, two distinct strains of Gladioli—those which, having more of the *Gandavensis* blood in them, show the spike on one face; and those of the *oppositiflorus* type, an inferior class, where blooms are produced on either side of the stalk. Now the Yucca leaves, being very strong and slightly concave, have the effect, especially when they are placed in pots and thereby made stiffer still, of throwing this latter class of flowers forward, consequently of giving them the appearance of also being grown with one face. Especially is this the case when the spikes are stitched in to the Yucca leaves, and so kept in their place.

I am not sure, after all, whether it would not be well to adopt the rule with regard to other florists' flowers, and let them be shown as they are grown, without the addition of any foliage.

I heard some one say, looking at Mr. Standish's noble collection, "There's the disease and no mistake!" whereas the foliage was all cut from one sort, Fanny Rouget, in which there is this shade of yellow.

Here let me say for the encouragement of those who are afraid to venture on them, that I have had no disease amongst mine, and that I attribute this in a great measure to thoroughly drying the bulbs. I shall shortly cut down all the stalks to about a foot, and then cover the bed with old Cucumber-lights, and when I get it tolerably dry take up the bulbs and then thoroughly dry them. This I believe to be the secret.—D., Deal.

THE VINE IN CANADA.—The partial failure of the Wheat crop, recurring every year, is beginning to produce a conviction that we have been too much in the habit of depending upon this crop. Many farmers are betaking themselves to the resource of Flax cultivation, for which, beyond all doubt, our soil and climate are well adapted. Grape culture has not hitherto been looked upon as a pursuit which could be followed in Canada with advantage. But if we may trust the evidence produced before a select Committee of the House, appointed last Session, to inquire into the subject of Vine cultivation in Canada, we must revise our former notions in regard to it. The Committee bring out the fact that there was an application from M. de Courtenay to the Govern-

ment in 1859, for assistance to enable him to demonstrate, by practical experience, that the climate of Canada is peculiarly adapted to the successful cultivation of the Vine. The opinion was in the first instance founded on the authority of Count de Gasperin, that for Grape culture the "climates most favourable are those where the duration of the season of vegetation is shortest, and where, in such season, the total heat is the highest; where the difference between the solar heat and the minimum heat is the greatest, and where, consequently, vegetation proceeds by shocks and not by a uniform march." M. de Courtenay stated to the Committee that his experiments have been successful both with the wild Vine of the country and with several delicate varieties of European Vines, and that these adapt themselves without difficulty to the rigour of the climate; and he has manufactured good sound wines from these Grapes. Mr. Justice Day cautiously certifies that the wine "is of a quality to justify confidence in a high degree of ultimate success." Chief Justice Drummond, after testing two kinds of it, pronounced "one of them especially superior to the *vins ordinaires* of France." Mr. W. J. Brickla, of Quebec, who has been in the wine trade for years, affirms that the native wine in question "is such as would be of high marketable value in any country." Mr. Lemoine, more enthusiastic, pronounces it "delicious," and another witness assures the Committee that it would have been "pronounced good in any wine-producing country." This enterprise is to be prosecuted both in Upper and Lower Canada, and also the cultivation of the Mulberry, and we heartily wish success to the undertaking. (*Toronto Leader*.)

ROYAL HORTICULTURAL SOCIETY.

FLORAL COMMITTEE, September 13th.—At this meeting many interesting plants and flowers were exhibited, seedling Dahlias prevailing. There were many good ones among them, but very few of extraordinary merit. Mr. Salter, Hammersmith, brought plants of a new variety of *Cineraria maritima*, named *compacta*, of dwarf habit, but the foliage not so white as with the old well-known kind; scarlet *Pelargonium multiflorum*, a semi-Nosegay, with bright scarlet flowers and zonate foliage, but there were not sufficient brusses to test its merits; and scarlet *Pelargonium Crispum Mantle*, a Nosegay, with crimson flowers shaded with rosy purple.

Mr. Turner, Slough, sent seedling Dahlia Leah, deep golden yellow tipped with rose, exquisite form, and in every respect a first-rate flower—first-class certificate; and Dahlia Miss Roberts, deep lilac rose, rather too flat, and inclined to be coarse, the colour was the great recommendation—second-class certificate. Mr. Rawlings exhibited several seedling Dahlias. Spitfire, a dull red, of good form, a promising flower, had a second-class certificate. The other seedlings were not thought worthy of distinction—viz., Queen Victoria, Exquisite, Sparkler, Modesty, Mr. Sladden, Constancy, Prince, Mrs. Sladden, and Humility. Mr. Pope, Chelsea, had seedling Dahlia Walter Newman; and Mr. Legge, Edmonton, seedling Dahlias Mr. Golding, Ellen, Crimson Perfection, Beautiful, Royalty, Glory, and Excellent, none of which were thought worthy of a certificate.

Mr. Perkins, Coventry, exhibited seedling Verbena Shakespear, scarlet, like Lord Leigh and Foxhunter a very fine flower. Mr. Saltmarsh brought several seedling *Pelargoniums* with highly coloured and variegated foliage, much resembling Mrs. Pollock and Sunset. One called Meteor seemed rather in advance of the others. It is equal to Mrs. Pollock, of good habit, the zonate markings distinct and beautiful. It is a variety well worth growing. A plant of Mrs. Pollock was sent for comparison, but it was a sad specimen of that truly exquisite kind. Sunrise, with highly coloured foliage, was also good. The others were Luna, Hon. Mrs. Mildmay, too much like Mrs. Milford, and Admiration, a pleasing white variegated-leaved variety with crimson zone, but inferior to the beautiful Italia Unita. Little Treasure, a free-flowering dwarf variety, with scarlet flowers, like Tom Thumb, of very compact habit, producing a profusion of brusses of flower, and very useful for bedding purposes, received a first-class certificate. Mr. Cooling, of Bath, again exhibited his beautiful striped Verbena Annie, it now re-

ceived a first-class certificate, having secured a second on a previous occasion. It is a very pretty variety.

Mr. Bull, Chelsea, exhibited *Caladium splendens*; the plants sent had but one leaf each. It is a promising kind; and the immense leaf of pale green being richly stained in its centre with deep rosy crimson, renders the plant very attractive. There is little doubt that it will take a good position among other *Caladiums* when grown stronger. The Committee requested that it might be sent again. *Gemera Chromatella*, also from Mr. Bull, producing a pale golden flower, with dark velvety foliage of green and black, received a second-class certificate. He likewise contributed a weak plant of *Saccolabium Dayii*, not in condition; a pale variety of *Lilium auratum*, *Lilium lancifolium densum*, reflexing its bright rosy petals, and producing a good head of flowers; Dahlia Gem of the Dwarfs, flowering in 60-pots (the flower was bad and out of character); *Petunia Rigollette*, purple shaded with white on a pale purple ground; and double *Antirrhinums* General Manara and Giuseppe Garibaldi. The latter was awarded a label of commendation. We doubt whether these double varieties will be very useful, they have a ragged and untidy appearance not unlike a faded semi-double German Wallflower. From the same exhibitor came also *Pentstemon Conquest*, deep marked throat, with four others; and *Aucuba japonica vera*, with berries, a plant of which received a first-class certificate when shown by Mr. Standish at one of the spring meetings.

Messrs. Downie, Laird, & Laing sent two seedling *Pentstemons*, and Mr. Parsons, gardener to W. J. Blake, Esq., Welwyn, four seedling *Achimenes*—Aurora, a perfect gem with its superb finely-formed bright rosy carmine flowers—first-class certificate; Rose Queen, deep purplish rose, fine broad flower—first-class certificate. From Mr. Burgess, Chelsea, came Dahlia George Griswold, and from Mr. Tillery, Welbeck, a box of seedling Hollyhocks, the flowers produced on plants raised from seed sown in February, 1884; also four seedling Dahlias, which, having sustained much injury in the journey, could not be examined. The seedling Hollyhocks were many of them very good varieties. Mr. Wm. Paul brought cut flowers of his seedling Roses, Dr. Lindley, and Rose globosa, proving their character as Perpetuals.

The FRUIT COMMITTEE did not meet on this day. Mr. Bousie, gardener to Lord Taunton, Stoke Park, sent three bunches of white seedling Grapes, which were unripe; Mr. Wm. Paul two bunches of a very superior seedling Grape of the Hamburg class, with rich Frontignan flavour; and Messrs. Lee, Hammersmith, a seedling yellow Plum somewhat similar in character to Coe's Golden Drop.

FLORAL COMMITTEE, September 19th.—A meeting of the Floral Committee took place at the Society's gardens, Chiswick, this day, at which the majority of its members were present. It was intended to have included *Verbenas*, *Petunias*, &c., among the plants for examination, but the extensive collection of scarlet *Pelargoniums* alone occupied the whole attention of the Committee. It was most satisfactory to hear from every member present an approval of the new arrangement of the trial plants, which, however imperfect this present season, will, we trust, from several useful suggestions made, be greatly improved next year; and when we consider the delay in making these new beds which proceeded from the reluctance on the part of the Council to attend to a letter addressed to them on this subject by the Floral Committee, and the very late period at which many of the trial plants were sent to the gardens, as well as the unusually dry season the plants have had to contend against, we may congratulate those interested in this matter that so much of great interest is to be seen in the old gardens.

It was difficult in many cases to decide the merits of some varieties which had not attained their usual vigour or character of habit, but a great number received their respective marks of estimation, a list of which we shall furnish at some future time. The plants marked x x were considered worthy of a first-class certificate, those marked x x meriting a second-class certificate. We cannot refrain from observing how very injudicious it was to invite the public to examine these trial plants before the Floral Committee had passed judgment upon them. Who is to blame for this we do not stop to inquire, but it is very evident that whenever any attempt is made to carry out some practical point in horticulture, it is certain to be marred by the ill-

judgment of some prevailing influence. Encouragement to those who willingly give their time and labour to this work is never or sparingly given, but too often discouragement follows their exertions. We would advise those who are interested in the scarlet *Pelargoniums* to lose no time in making their notes for another year, and to inspect the extensive collection now in perfection at Chiswick; but we would add this caution, be it remembered, that not every scarlet *Pelargonium* is of necessity a bedding-out plant, nor suitable for this purpose. It is a general and too common mistake made, that all scarlet *Pelargoniums* are bedding-out plants. Many of them, scarlets as well as the more delicate-coloured varieties, will never be seen to perfection unless grown in pots under glass, and protected from the sun, rain, and wind. As a proof of the justice of this remark, let a visit be paid to the greenhouse in the fruit garden at Chiswick, where many of Messrs. Bull's, Van Houtte's, and Salter's most exquisite varieties may be seen in the greatest beauty and perfection.

LIVERPOOL BOTANIC GARDENS, 1863.

In an article which appeared a few weeks ago, my respected coadjutor, Mr. Fish, alluded in terms of great admiration to the manner in which these gardens were kept last year, and I was in hopes that we would have had from him one of those lucid descriptions which have made the readers of *THE JOURNAL OF HORTICULTURE* so well acquainted with places of note, both in this country and in the Sister Isle. It is probable, however, that he may have had the advantage of seeing this fine place in the present season, and may, therefore, intend to give us a later account of it; but should this be the case, the few remarks which I am about to make as to its appearance in 1863 may nevertheless, be interesting, as showing the then state of this garden.

Before I proceed further with the subject of botanic gardens, I may remark that the one here alluded to has more claim to that name than many to which the term is applied. The science of botany, however much the fact may be regretted, is, certainly not a popular science, for it is probable that the number who studied it thirty years ago was as great as it is at the present time. In the Liverpool Botanic Garden botany is cultivated in the manner most likely to gain the favour of those who have not the means, nor, perhaps, the inclination to pursue botanical researches to any great extent. Botany and floriculture are agreeably and judiciously combined, and the students in each department have each their lesson, and a neutral ground on which to meet and discuss progress. In no place to which I have been has more variety in the flower garden ornamentation been brought together, and nowhere was more taste shown or care taken in the management of the plants employed.

The Botanic Garden of Liverpool is situated on a rising ground to the north-east of the town. It is sufficiently near to be at all times accessible, and not too near to suffer much from the smoke, which in every large town is an obstacle to good cultivation. The approach is by one of those wide open streets which radiate from a central point to some place in the suburbs. Suitable and convenient gates admit the visitor into the garden, which is open to the public without charge. This advantage contrasts favourably with the plan adopted at some other places, where considerable difficulty is met with in gaining admittance, or where a heavy charge is made. The grounds extend over several acres. The outer wall is covered with creepers, and in certain places is used for training shrubs or plants not generally esteemed hardy. A range of plant-houses occupies the northern side of the ground, with some sheds and other necessary offices behind. The ground elsewhere is divided by belts of shrubs or trees marking out by irregular and pleasing outlines, several divisions, which are planted in various ways. Some contain groups of plants having a botanical affinity to each other; others a mixture of such plants with some of the popular bedding plants of the day; while some compartments are devoted to showy plants alone. In many instances the latter were intermixed with plants not often employed for ornamental purposes, and I took a few notes at the time of such as struck me as the most deserving of attention. I will not attempt to describe the series of beds of which those noted

formed a part, but will simply state what were remarkable, making at the same time such comments as seemed to strike me as necessary.

A long bed planted in stripes or ribbon fashion, had a row of *Calceolaria amplexicaulis* in the centre, a row of dark *Calceolarias* on each side, then a row of *Geranium Tom Thumb*, and finally an edging on one side of *Stachys lanata*, and on the other *Antennaria gnaphalioides*, the last named being a plant by no means to be despised.

Two scroll beds were each *Verbena*, one being a good scarlet and white mixed, and the other purple and white mixed, the latter being the most telling. Both beds were edged with *Cerastium*.

A large circular bed was planted entirely with blue *Lobelia* and *Cerastium*, the latter forming the ground, the *Lobelia* being arranged in four heart-shaped figures meeting in the centre; and intervening between them were four knots of the same near the outer edge. This was a very effective bed, much better than if it had been loaded with more colours. I may also state that another circular bed, having a tree in the centre, had a broad band of blue *Lobelia* around it at the distance of 4 feet from the collar, and on each side of that band was a single line of *Cerastium*; this was also effective, blue and white being in general the most telling colours.

Another circular bed was *Alma Geranium* and the dark-leaved *Trifolium*, usually called the Irish Shamrock, mixed. The combination looked pretty well; but the bed would have been better with an edging of *Cerastium*. A similar bed to the last had *Geranium Golden Chain* instead of *Alma*; this also looked well. A circular bed of considerable size had an inner circle of *Scarlet Geranium*. The outside ring, about 4 feet wide, was planted in wedge-shaped panels, alternately blue *Lobelia* and *Variegated Alyssum*; this looked well. Another bed of *Perilla* and double *Pyrethrums* mixed, with an edging of *Cerastium*, likewise looked well. A bed of a more permanent kind was *Aucuba japonica* mixed with a *Delphinium*, a ring of *Ivy* going round the *Aucuba*, the whole being edged with *Stachys lanata*. This bed was very good, and doubtless lasting.

Amongst other beds I noticed a general use of dwarf *Dahlias*, with some *Ageratums*, and other popular flowering plants, while for an edging the neat-habited *Antennaria divaricata* was introduced with good effect, though perhaps not better than the *Variegated Veronica*, which was also used. A rather pretty *Oxalis* called *rosea*, said to be an annual, looked well at the time I saw it, and a yellow *Pansy* deserved more general cultivation. Several other hardy herbaceous plants were brought into similar use, as one or two *Sedums* and *Saxifrages*, a *Santolina*, one or two *Grasses*, and sundry other plants not usually met with in fashionable flower gardens. The whole of the grounds were well managed and in good order, reflecting great credit on all concerned; for, independent of the diversity of the floral department, the botanical division was scarcely less attractive. Plants of singular growth, with some of great beauty, were given a prominent place, not, however, so as to disturb a systematic arrangement, but in such sort as to lead on the inquiring student by the most attractive means; while to the admirer of the much-abused, as well as much-vaunted flower-gardening of the present day, no place that I visited in 1863 presented greater variety.

J. ROXBOROUGH.

PACKING PHALÆNOPSIS, SOPHRONITIS, AND BURLINGTONIA.

THE peculiarities of the structure in the form of the leaves of these Orchids renders it necessary to use more care in the packing than with the majority of Orchidaceae. I will, therefore, give my reasons for the different packing of the above, *Phalænopsis* more particularly, the leaves of which are of a much more tender nature, few in number, so succulent, and susceptible of injury, hence very liable to rot and fall off from one plant on to another, and cause decomposition of the whole. To prevent this I would, previous to importing, have them partially established on logs of wood from 2½ to 3 inches in diameter, and in length to fit the inside of the case, such to be charred a little on the outside to keep down fungus. To this I attach great importance. Having

established them on logs, carefully and very tenderly wrap each leaf in tissue paper, put it but once round, as more than one thickness will have too absorbent a property for the plant. Each leaf must then be very tenderly tied to prevent its moving. The logs so prepared are then ready for placing in the case, and must be fixed clear of everything inside by means of screws through the end of the case, and entering the log. This will save much knocking about in unpacking, which must be the case if nails are used. The logs will then appear to be slung from one end to the other. A covering must next be constructed of sticks and moss clear of the plants, so as to leave them in a chamber, which will have the appearance of a moss partition. More logs can then be introduced as before, so continuing till your case is full.

As to the time of removal for Orchids for importing, the most fit period is just as the plants have completed their growth, swelled off their bulbs, become a little consolidated, and have the appearance of a partial ripening.

By whatever route the cases are forwarded, I hold that nothing surpasses the moss alluded to in my previous paper for packing the whole order of Orchidaceæ. Having received consignments from nearly all parts of the globe where Orchids are found, both by sea and overland route, in Wardian and closed cases, those packed according to my directions arrived in much better condition than in any other mode I have witnessed.—A LOVER OF ORCHIDS.

CLOTH OF GOLD AND GOLDEN CHAIN GERANIUMS.

In reply to your correspondent "J. A.'s" inquiry concerning the growth of Cloth of Gold and Golden Chain Geraniums, permit me to remark that I have had some plants of Cloth of Gold which, like his, scarcely made a start till within the last month or five weeks, and others which grew freely and looked well all the season.

The stand-still plants had been taken up from the beds last season, potted, and kept in a moderately warm place through the winter, and were rather severely pruned in March to obtain cuttings. The plants from these cuttings, as also those struck in the previous autumn, did well; and I attribute the failure of the old plants to make growth in the early part of the season to the severe cutting-in, and the forcing which they received to produce the growth for those cuttings.

Golden Chain, which had not been subjected to such severe treatment, made earlier growth; but in this case, too, the autumn-struck plants grew the most freely, although not so freely as the Cloth of Gold.

I may remark, too, that I saw last season Golden Chain in a newly-made garden grow with a vigour surpassing anything I ever saw in Cloth of Gold. In this instance the plants were young.

Madame Vaucher Geranium has been quite a rosy pink with me this season till quite lately, when the flowers have been nearly a pure white. I have heard Snowball and White Tom Thumb similarly spoken of as respects their being anything but white during the hot weather. Have any of your correspondents found them return to their professed shade since the rainy weather set in?—J. P. M.

CLOTH OF GOLD has done well here (Upper Clapton, Middlesex) this season, much finer than ever we had Golden Chain. Indeed, it has been so beautiful, that we thought it rivalled the Calceolarias, and wished we had planted more of it instead of them. We find it requires a little extra nursing. Our beds are dug deeply in the autumn, and for the more delicate Geraniums we fork in during March a plentiful supply of leaf soil, or rotted bog earth. This makes them grow much stronger.—W. C.

SOCIÉTÉ CENTRALE D'AGRICULTURE, D'HORTICULTURE, ET D'ACCLIMATATION DE NICE.—On the occasion of the "Concours Régional," which will be held at Nice in April, 1865, this Society has decided upon the organisation of a Grand Horticultural and Industrial Exhibition, which will be in-

ternational and universal. This project has met with the warmest encouragement from the Government, and will be carried out under the special patronage of their Majesties, the Emperor and Empress.

REMARKS ON SOME DICECIOUS PLANTS.

BY W. G. SMITH, ESQ.

(Read before the Society of Amateur Botanists.)

Or late years, various hypotheses have been started, both in this country and on the Continent, which, though more or less borne out by experiment, are on the whole so thoroughly opposed to all former experience, that believers in them have been but few. I allude in particular to spontaneous generation, to the power possessed by Rotifers and some other animals to survive drying, baking in ovens at a great heat, saturation in powerful acids, &c., and on the application of some restorative to become once more full of life and instinct; and to the so-called pathenogenesis, or the possibility of certain female plants and animals possessing the power of fertilising their own ovules and ovums without the action of the male principle.

It is principally on the latter that I propose making a few remarks, and recording some of my own observations.

In *Bryonia dioica*, and probably all other dicecious plants, I think we may start with the assumption that when the ovules have been fertilised apart from contact with the pollen of the male, a fertilising influence has been at work in some form or manner. I think an exaggerated importance is attached to the functions of various organs. For instance, although anthers generally bear the pollen, under certain conditions other organs will produce pollen. Instances of this are on record. I have near me a drawing, copied by myself from nature, showing the pistil bearing an anther as well as a stigma (in *Crocus vernus*); on the end of this anther again is another small stigmatic surface. It is also well known that petals occasionally bear anthers, generally situated in their thickest part, as in *Nymphaea alba*, and in the double forms of the garden Poppy. I have frequently seen the middle of the petal of a double Poppy open and discharge pollen, showing the close affinity of all the organs of the flower. Instead, then, of jumping to the conclusion that a female flower is able to fertilise itself without pollen, it would be well, in all dicecious flowers, to see if the pistil or petals are ever capable of producing or do produce pollen; or if abortive forms of the stamens occur, that on occasion may produce pollen so as to fertilise the ovules when the flowers are absent.

In my mind it is an open question as to whether a female flower cannot be fertilised without the direct influence of true pollen. If anything will do this, I am inclined to think it is the nectar found at the base of the petal; this is probably the nearest ally to the true pollen, and in some *Ranunculaceæ* I have observed the nectary bearing pollen in the place of nectar. In some female flowers that bear this nectar-like secretion, is it not probable that on certain occasions the nectary may play the part of the anther of the male? Or may not pollen be at times produced from a petal on its hastening forward to the next stage of flower growth, a stamen?

It has been stated rather positively that the female flowers of *Bryonia* and other plants have no traces of stamens or anthers. M. Naudin of Paris, in his valuable and highly interesting paper "On the Formation of Seeds without Pollen" ("Comptes Rendus," 1856, p. 538, and republished by Dr. Seemann in "Hooker's Journal of Botany and Kew Miscellany" for 1857, ix. p. 53), has the following passage:

"In 1854, I observed in ground close to a wall and palisades, belonging to the Museum, a female plant of the common Bryony (*Bryonia dioica*), quite alone in this ground, and which, from thousands of flowers which it had produced, had set and ripened fruit in very great numbers, but in a proportion incomparably less than that of the flowers. These fruits contained well-formed seeds. In November of the same year I had fifteen of them sown in a hothouse; all came up very well. In 1855 this female Bryony fructified as it did in the preceding year, and in the same proportion as it had done in 1856. I have examined the flowers many times, and have never found in them any traces of anthers.

We may then suppose that some fruits which it produced each year proceeded from fecundations effected by the intervention of insects. What follows will prove that this reason cannot be advanced.

"In April of this year I caused to be planted, in the same border where the Bryonia was found, a second female specimen, raised from seeds produced in November, 1854, and which till then had remained potted. Doubtless on account of its youth this plant did not develop much, but it was covered with flowers, which, without exaggerating, I may reckon at many thousands. All were females; in some I perceived not the slightest vestige of anthers, and yet, remarkable to say, all, or almost all, produced fruit now ripe, which gave to the withered branches of the plant the appearance of long red bunches. I took a hundred of them promiscuously, to examine their contents; of this number there was a dozen containing no seeds at all, forty-five with only one, twenty-nine two, eleven three; there were only two with four seeds, and one alone which contained five. This result does not sensibly differ from that presented by the plant which grew close to a male plant.

"Yet while this second Bryonia was literally covered with fruit, the old plant, distant from it only a few yards, bore neither more nor less fruit than it did in the preceding years. We cannot say, then, that in both fecundation may have been effected by insects carrying pollen of the species, since it is evident that they would have equally taken it to both, and that both in consequence would have equally borne fruit. Now, as I have just said, the difference in this respect was enormous. I can only explain it to myself by the particular individual dispositions; in other terms, by veritable idiosyncracies."

At the base of the petals of the female flower of *Bryonia dioica* may be seen a sort of globular gland surrounded by hairs. This would seem to answer to the anther of the male. It is very rarely if ever absent, and sometimes takes a slight twist, like the normal anthers. It is a very minute object generally. I have had some difficulties in carrying out my experiments on this plant, but may mention one that is decisive. I gathered, several times, branches of the female plant with the flowers in bud, and kept them in water under a propagating-glass till they opened. When examined, one or two grains of pollen were found in nearly every flower, probably produced by these gland-like bodies to which they were attached. The ovaries of most of the flowers became swollen, but eventually dropped off. One peculiarity of the plant is, that the opposite sexes are generally found in groups, and the two sexes very rarely together. I have once seen a male and female stem growing close together, but could not ascertain whether or not they were thrown out from the same rootstock, although I think it probable; for, judging from the natures of other plants, there is no reason to believe that the rootstock is male or female, but that it is capable of throwing up either a male or female stem at different times, as circumstances or the nature of the plant may direct. I knew this to be the case in another instance.

I may, however, say, that in various berries of the Bryonia I have planted in my own garden, all the seeds contained in each separate berry produced plants of one sex, for a single berry does not appear to contain seeds capable of producing plants of both sexes the first year. This sufficiently accounts for the groups of male or female plants usually seen in the hedges.* Should a bird, for instance, drop a berry in any locality, it would produce a group of males, or a group of females, although I am inclined to think a male plant one year may become a female plant another year. But in *Bryonia*, contrary to my experience in other dioecious plants, I have never found occasional male flowers on a female plant, or occasional female flowers on a male plant. It is common to find a female plant or a group of females (with no male anywhere near), with all the seeds fertilised and covered with ripe berries. In some female plants growing in my neighbourhood, and removed a considerable distance from all males, I have seen nearly every flower fertilised; and when the female flowers were examined, I found their

interiors profusely covered with pollen, evidently brought from male plants by insects, as every one who has noticed *Bryonia* must have observed what a profuse quantity of pollen their anthers shed.

I will now turn to *Lychnis diurna*, or *dioica rubra*. I am not aware that the female form of this plant is said to be able to fertilise itself, but to a superficial observer it might well be supposed to do so. From my own experiments I well know individual specimens of this plant to be sometimes entirely male, then monoecious, and eventually entirely female. I have a plant in my garden, the rootstock of which has produced all three since the early spring of this year. When first planted it threw up stems containing male flowers only. This continued for a month, when females began to appear; but it is clear, that if all the males had died off before the females were produced, no seed could be brought into existence; on the contrary, when all the males had died and dropped away, and females only were on the plant, all the ovules were fertilised without exception. How was this effected? Was parthenogenesis at work here? Not so; the original males, long since dead, caused the fertilisation. But how, if the males were dying off when the females were only in bud? By this simple contrivance of Nature:—When the female flowers had attained maturity, and were shedding their pollen, the female buds appeared below, with their stigmas hanging out of the buds, so that there was a very good chance of all the females being fertilised, although only in bud. Nor was this all, for I believe in this plant, as in nearly all others, insects are designed to play their parts. At first sight, it is not clear how insects could help this plant, but I will explain. In the first place, the crimson colour of the petals of the male flower must be attractive to insects. Suppose an insect has got the pollen from the male on to his head, legs, &c., and the crimson petals of the female have not yet appeared, what is there to attract him in turn to the female? Simply this: whilst the male has got a calyx barely marked with red lines, the calyx of the female bud is much more crimson and attractive; so that, whilst an insect is attracted by the crimson of the petals of the male, it is in turn attracted by the crimson of the calyx of the female, and if the insect alights at all he must go at once on to the stigmas, and so Nature's object is effected.

When one observes in the vegetable kingdom the various forms of plants, some dioecious, some partially so, some hermaphrodite, and others seldom or only under peculiar circumstances ripening their fruit, the question suggests itself as to whether all plants are not gradually changing from one state to another. I am borne out in this hypothesis by Mr. Darwin, who remarks that *Primula* is probably gradually becoming dioecious from the hermaphrodite condition. Or, whilst one set of organs are being suppressed, the complementary set are being more fully developed. I believe this to be probable, and supported by many facts in both the animal and vegetable kingdoms. If we take the animal kingdom, we find a limited number of creatures unquestionably hermaphrodite, but of a very low order; but if we call all the creatures possessing separate sexes dioecious, we then come at once to a much higher order of being. I believe it is the same in the vegetable kingdom, for where the sexes are separated there must be more difficulty in breeding, the act of fertilisation depending upon external, or, perhaps, accidental circumstances. The lower any object is in the scale of nature, either animal or vegetable, the more profusely it multiplies itself; whilst the higher, the greater difficulty there is in breeding. Take horses, for example. Every one knows the difficulty there is of increasing the number of highly-trained animals. Even in man, as a rule, the lowest and most debased races increase most rapidly. The higher order of animals produce one at a birth, the lower hundreds or thousands. The same applies to vegetable life; the lower the plants the more profuse the breeding, as in the *Toadstool*, with its millions of spores; and in the opposite degree those flowering plants are the highest that produce the least number of seeds, or that have the greatest difficulty in propagating themselves.—(*Journal of Botany.*)

BRIGHTON SHOW.—We are glad to find that the gentlemen of the north are well maintaining their reputation for

* I think seeds themselves are probably not either male or female, but that after-influences produce the sex; as in animals the sex is not developed in the early embryo life of the creature, nor till the embryo has attained a certain age.

producing first-class fruit, and especially Grapes. We have just had another instance of their success, for Mr. Henderson, of Trentham, gained at the autumn show held at Brighton on the 14th and 15th inst., the first prize for the best collection of eight dishes of fruit, and the railway cup as well. Such a position is not easily won at the Brighton Show, which is second to no provincial show in the kingdom.

ENTOMOLOGICAL SOCIETY'S MEETING.

THE September Meeting of the Entomological Society was held on the 5th inst., F. F. Pascoe, Esq., F.L.S., President, in the chair.

The ravages of the Turnip grubs, or caterpillars of a species of Moth belonging to the genus *Agrotis*, were brought under the notice of the members by Mr. Dunning, the Secretary, who had received a number of living specimens from a correspondent in Yorkshire, who had suffered a loss of at least £150 by their attacks on fields of Turnips; and Professor Westwood gave an account of their attacks on different kinds of vegetables in his own garden near Oxford. Turnips, Beetroot, Carrots, Endive, Lettuce, Potatoes, greens of various kinds, and Sea-kale had all been attacked, and so numerous were they that not fewer than twenty-nine had been taken around the root of a single Broccoli, and his gardener had, day after day, collected a pint measure of them, which were greedily devoured by fowls. Hand-picking and laying traps (by burying cabbage leaves or stems), were, indeed, the only available remedies against their attacks.

Mr. Ianson exhibited four minute species of Staphylinids recently taken in this country, hitherto unrecorded as British.

The Rev. Hamlet Clark exhibited a beautiful Beetle, *Hyprestis ocellata*, a native of central India, which had been found alive on shipboard, about fifty miles from Madagascar, and which was supposed to have been reared in wood brought from India. Various instances were, however, quoted of the powers of flight of insects caught at long distances from land. Some have been taken 150 miles from the coast of Africa; the north-east trade winds having evidently had considerable influence in allowing the extension of their flight.

Mr. Lowe exhibited a collection of Coleoptera and Lepidoptera taken by himself in the spring of the present year in the Holy Land, and pointed out the difference of several of the species from closely allied forms found throughout Europe. Amongst these was a modification of the *Papilio Podalirius*, which was stated not to occur to the west of the river Jordan. The geographical range of plants as well as insects was indeed strongly marked in Syria, the plants to the south of the Dead Sea being quite distinct from those of more northern localities.

Mr. Larkin exhibited a newly-invented glazed case or frame for exhibiting insects suspended on the walls of rooms.

Mr. Tegetmeier called the attention of the members present to the series of letters recently published, anonymously, on the economy of the Hive Bee, in the *Times*, by Dr. Cumming, many of the statements in which were the "most incorrect that could be imagined, and full of ridiculous and disgraceful blunders." Many of these statements were reviewed and their incorrectness shown. Thus a swarm was said to consist of five or six thousand individuals, and to be of the size of a bunch of Grapes, whereas a good swarm would fill a peck measure. Bees were said to be early risers, whereas it is seldom that they are out of the hive before eight o'clock, even if the hive be exposed to the sun. Again, they were said never to interfere with the property of their neighbours, whereas the deprivation of weak hives by robber bees from strong ones, was a fact known unfortunately by every bee-master.

Professor Westwood and the Rev. Hamlet Clark expressed their regret that such a host of misstatements should have appeared in a leading journal, more especially as it appeared that they had been written as advertisements of a work since announced for publication by Dr. Cumming.

Memoirs by Mr. Hewitson containing descriptions of new species of exotic Butterflies; by Professor Westwood on new species of *Sagrides* and *Megalopides*, Plant Beetles with thickened hind legs, natives of Africa, Asia, and Australia;

and by the Rev. Hamlet Clark on a number of new species of Plant Beetles, belonging to the genus *Schematissa*, from the New World, remarkable for their striking resemblance to species of *Lycus*.

Lieut. Beavan communicated a memoir on the natural history and transformation of the Tussock-Silk Moth of India.

PEACHES IN AMERICA.

ONE of the *Tribune* reporters has been among the Peach men, and visiting all the railroad depôts and steamboats bringing Peaches to this city, and Jersey city opposite; also most of the large wholesale dealers and receivers of the fruit. He has collected many statistics and items of interest and value to those living outside of the city, and who have faint conceptions of the magnitude of the trade. They would receive considerable enlightenment by visiting Jersey city about noon any day, except Sunday, and witnessing the arrival of the Delaware Peach train of twenty to thirty cars, completely filled with Peaches, each car containing about five hundred baskets, or their equivalent in crates. We will here remark that the Peach crop of Delaware and New Jersey, is larger than in any former year since 1857, much the largest portion of which is sent to this market, though large quantities are sold in Philadelphia, and smaller amounts in Baltimore and Washington.

The majority of those already sent in are from Delaware, where the yield is not only very large, but the fruit also of fine quality. About one-half the crop of that State is now in, and South Jersey is sending freely, while those from the central portion of the State are just beginning to arrive. The Jersey yield is generally good, though the drought materially lessened the crop in some localities.

The railroads passing through the Peach regions run special trains during the fruit season made up wholly of Peaches. Freight cars, and in some cases cattle cars, are fitted up with shelves for carrying four tiers of baskets, and they are pressed in so closely that there is very little motion to them. The baskets are generally uncovered, though a few have cloth covers tied on. Some extensive growers use slat crates instead of baskets, a portion of them holding two Peach-baskets, or one bushel each, with a partition through the middle to relieve the pressure, others holding a single basket of fruit. These crates are very convenient for reshipping the Peaches further north, and are gaining favour among dealers. A car can be packed full of crates without reference to shelves, the fruit can be inspected from all sides, and pilfering boys who throng about the trains upon their arrival cannot purloin the Peaches.

As already remarked, the railroad companies drop these cars along the route, where growers fill them, and at the appointed time, generally late in the afternoon or at night, they are picked up and taken to the city, intending to reach there early in the morning. There is a great deal of complaint regarding transportation this season. The crop is so large, and the railways so taxed with passengers and freight, that thousands of baskets are not unfrequently left behind to rot, or they are subsequently sent forward in a damaged condition.

Most of the Peaches are consigned to commission dealers, some of whom are interested in the orchards; but generally they merely receive and sell the fruit on commission, meeting the trains, and either selling in lots at the depôt, or carting it to their stands, generally in the vicinity of Washington market. These large dealers seldom retail, but sell in quantity to up-town grocers, and to shippers, or they send direct to Boston, Providence, Hartford, or some other eastern city, to fill orders on hand. Nearly one-half of the Peaches now coming here are either sent up the Hudson, to the various cities along the river, or to the eastern cities, and more would be sent could freight or express accommodation be had. The commission for handling or selling is 10 per cent. on sales. The prices obtained for good fruit have thus far averaged about 1 dol. 25 cents. per basket, ranging from 1 dol. to 1 dol. 50 cents. Some of the dealers receive one to two thousand baskets per day, the carting and disposal of which keeps them on such a stretch, that they feel a relief when the season is over.

The proprietor of an extensive glue factory in Philadel-

phia having a large amount of waste material, so offensive that the authorities demanded its removal, bought a tract of wild land in Delaware, and kept a sloop carrying the refuse from the factory to this tract. The waste was spread over the surface quite thickly, and, after two or three years exposure, the ground was put in order, and a portion planted with Peach trees as an experiment. They succeeded so well that he kept on, until he now has 600 acres in trees. The manure will doubtless be of a lasting nature, and its strong animal odour may be offensive to the borer, that pest of the Peach-grower.

The king of Peach-growers, however, is a Jerseyman of the name of B. Reed, who, in connection with his sons, expects to market one hundred thousand baskets. His trees are in Ocean and Monmouth counties, New Jersey. One orchard contains forty-six thousand trees, and he is now sending from one to two thousand baskets to this city daily. The fruit is of good quality, and is sold wholesale at an average of about 1 dol. 12 cents. per basket. The most of his crop is still to arrive.

Some of the growers are nurserymen, and raise their own trees; others, though not nurserymen, grow their trees, but most Peach-growers buy their trees, one year old from the bud, of nurserymen. They begin to bear the second year from planting, and yield a full crop about the fifth year. It is rarely profitable to keep them more than ten years, and it is useless to plant a second crop of trees on the same soil. Large growers often buy a farm with a record clear of Peaches, plant it with this fruit, and while still in vigour buy another farm to succeed it, selling the first for ordinary farm crops.

It is said that after a rest or change of some ten years the soil will again bear Peach trees; but most growers prefer to try a new or fresh locality. In planting the trees are set about 18 feet apart, and reference is had to the kinds ripening in succession, so as to prolong the season. Quite an effort is made to originate late sorts, as they usually bring high prices after the season is looked upon as being over.—(New York Tribune.)

ORCHARD-HOUSE AT GREAT MARLOW.

I as well as many others have been watching the late controversy with regard to orchard-houses. At present it is a subject of great importance, from the fact that orchard-house culture is extending in all directions except, perhaps, in very large gardens. For some reason a great many gardeners at such places do not take kindly to this movement. This may arise from their having abundant means of accommodating most fruit trees under glass in good bodies of soil, in which way the trees do not require one-third of the attention or that extra demand upon labour that is necessary to insure success in pot culture. At the same time no gardener ought to try to write the system down by pointing out failures, most frequently the result of inattention or helplessness; for without considering the large class to whom this mode of culture affords a great amount of pleasure, a comparison between a large collection of fruit scattered over an extensive place, and an orchard-house where all good varieties can be brought together and their merits compared, would, as far as enjoyment goes, result in favour of the latter being a useful appendage to every place. But I think any one, unless stubbornly prejudiced, has only to see a successful one to be converted.

In proof of my opinion: about the beginning of the month I accidentally visited an orchard-house in company with a gentleman of high authority in fruit matters, but he believed in none of those things called "Orchard-houses;" on leaving, however, he had certainly changed his opinion, and no wonder, for that house, at least, is a great success.

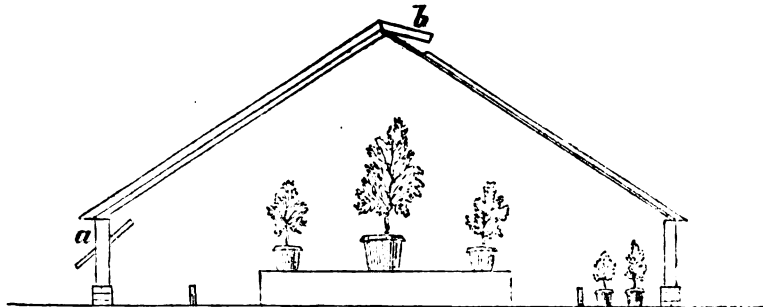
It belongs to Mr. Berger, of Great Marlow, and was arranged and constructed by himself. It is 75 feet long by 30 feet wide, with a height in the centre of 13 feet. As will be seen by the section, there is a bed in the centre, raised 18 inches, with a 3½-feet path all round, leaving a five-foot border on the level on each side. Air is admitted by the front light, *a*, being hung on a pivot, and by the top, *b*, moveable all the length. The whole was designed by Mr. Berger. The fittings are exceedingly tasteful, and very different from the makeshifts we frequently meet with. At the time of our visit most of the Peaches and Nectarines were over, but there were still sufficient to show their quality. Mr. Neighbour, the very intelligent gardener, to whom a great deal of the success is due, informed us that this season there had been 144 trees in the house, consisting of Apples, Apricots, Cherries, Nectarines, Pears, and Plums. Most of

the trees are in 13 and a few in 16-inch pots. The average yield was three dozen and a half to each tree. This includes Cherries which I suppose will hardly be considered fair. Upwards of 214 dozen Cherries were gathered, of Apricots 83 dozen, of Peaches more than 38 dozen, and of Nectarines 43 dozen. These were not small or badly-coloured fruit, for some of the Grosse Mignonne Peaches weighed upwards of 8 ozs. each; Royal George and Barrington, 9 ozs.; and many of the Nectarines 5 and 6 ozs. Now, if we take the stone fruit, excluding the Cherries and Plums, at the average price of 6s. per dozen, we have nearly £50; or, as good Apricots might be had for 4s. a-dozen, and Peaches and Nectarines at 7s., if we

take the average price at 5s. per doz., we have £41 for these alone. Of Plums there were 79 doz., of Pears 38 dozen, and of Apples 34 dozen.

The Plums were very fine, several varieties, such as White Magnum Bonum and Pond's Seedling, weighing 5 to a pound

Pears were magnificent. I do not know anything more striking than a quantity of monster fruit hanging all over such diminutive-looking wood and trees. Some of the fruit, such as Colmar d'Arenberg, weighed 19 ozs., and many other sorts 1 lb. There is a great difficulty in distinguishing the variety when so much overgrown. Some of the Emperor Alexander Apples measured 14 inches in circumference and weighed 1 lb.; several others did the same, and all, be it remembered, were very small trees in pots. None of these are plunged, but placed upon the surface, allowing the roots to run through the bottom into the border. They are mulched several times in the course of the summer with good leafy loam, and liberally supplied with water during the fruiting season. I should consider this one of the great points of success. The gardener told us that watering took up more than one hour every morning all through the hot weather, and he made a point of passing through several times in the course of the day. It must be evident that if small plants with that amount of fruit to feed are allowed to become once thoroughly dry and flag they must sustain a severe check, and if they retain the fruit after this it will never attain the same size that it would if this had not occurred. In autumn the trees are disrooted and potted in fresh-prepared soil, the whole being placed together on the bed of the house; the side borders are then filled with Lettuce, Endive, and dwarf Cauliflowers, all of which we were told do well, and are never injured by



the most severe frost except a few close to the sides. Salads are thus producing throughout the winter. Think of that all ye who have French cooks to supply.—J. F.

MONSTRUEUSE DE DOUÉ PEACH.

LIKE your correspondent, "W. M.," I have a Peach under this name. It came from France two years ago. It does not agree with the description of Belle de Doué, in Dr. Hogg's "Fruit Manual." The glands are kidney-shaped, not round; the fruit inclining to oval, very downy, small, and flavour not first-rate, but that may be from over-cropping; flesh melting, red next the stone, from which it does not part freely; colour dark next the sun, but not so much so as some other varieties; flowers small. Does "W. M.'s" Peach agree with this description? If so, we may console ourselves that we may have something new if not good.—W. D.

[Monstrueuse de Doué, and Belle de Doué, are distinct. The former, with which your description agrees, is not of much account. The Belle de Doué is excellent.]

GROWING MONSTER MUSHROOMS.

ON August 10th appeared in the *Times* an account of the system as practised in France of growing Mushrooms. Can you inform me if any of your correspondents have tried the system, and if so, with what results? or if you think it likely to be attended with success?—*Basford Park*.

[The communication to the *Times* is as follows:—"The following notice concerning the production of Mushrooms of gigantic size may interest many of your readers. It was communicated to the French Academy in 1861 by Dr. La Bordette (*Vide Comptes Rendus*, t. 53, 1861, pp. 235 and 671). The doctor was engaged in experimenting upon the subject during several years. The Mushrooms are first developed by putting their spores (dust-like seeds), upon a glass plate spread over with sand and water. The most vigorous individuals are selected, and it was with the *mycelium* (spawn), of these that he obtained the remarkable specimen presented to the Academy. The process is as follows:—

"A moist soil, composed of vegetable mould from marshy ground (known as *terre végétale de maraicher*), placed in a cellar, is covered first with a layer, about 10 inches thick, of sand and river gravel, and then with a layer, about 6 inches thick, of the mortar of old buildings got during their demolition. This soil, after the spawn has been sown in, is sprinkled with water containing about 32 grains of nitrate of potash (saltpetre), per square metre (about 10 square feet). The action of the nitrate of potash was manifested during six years.

"Dr. La Bordette informed the Academy that he had succeeded in raising Mushrooms on a soil formed entirely of sulphate of lime (gypsum, which by calcination yields common plaster of Paris), well beaten down. For manure he substituted nitrate of potash buried along with Mushroom spawn at a depth of 3 or 4 millimetres (0.12 or 0.16 inch). Nothing else was added. 'Under these conditions,' says the doctor, 'the growth of a variety of the common Mushroom (*Agaricus campestris*), which may be termed "Giant Mushroom," takes place indefinitely. While, according to the usual and complicated method of culture, the average weight of Mushrooms in the adult state is 100 grammes (1544 grains), Mushrooms may be developed by my method weighing on the average 600 grammes (9263 grains, or somewhat more than 1½ lb. avoirdupoise).'"

We shall be obliged by any of our readers stating the results of any trials they have made of this system. If none of them have tried it, we wish some of them would. Although we are not sanguine of great results, yet let no one condemn the statement until tested by experiment.]

WORK FOR THE WEEK.

KITCHEN GARDEN.

It would be advisable to have two separate receptacles for garden rubbish attached to every kitchen garden (and we

* Not from marshy ground, but from a market-garden.—[Eds.]

allude to this matter at present, because the accumulation of weeds and decayed vegetable matter is considerable at this season of the year), one to receive the matter convertible by gradual decomposition into manure, the other to contain every substance that can be conveniently burned. A good reserve of burnt earth and wood ashes would be useful in every garden; the latter may be advantageously substituted for manure of a stronger character in rich soil which it is desirable to relieve. *Cauliflower*, prick out, about 3 inches apart, the young plants of the August sowing for next year's early crop into beds of light rich soil to be watered and shaded until they take root; also the young Cabbage plants from the sowing made at the same time. *Cucumbers*, those on ridges will now, since the rain, give a good supply of young fruit to be gathered for pickling before the fruit becomes spotted, as they decline in productiveness. *Herbs*, the decayed flower-stalks of aromatic herbs to be cut down, and the beds cleared of weeds; the roots divided if an increase is required; and the tops, if not done before, dried for keeping. *Spinach*, thin out the winter Spinach sown last month to 6 inches from plant to plant, and the late crops of Carrots and Onions. As young weeds will now begin to appear thick and fast, the hoe should be kept actively employed on all favourable occasions to keep them down, and handweed the seed-beds, for if neglected for a week or two more weeds will overrun and seriously damage the seedlings, and then increase the labour of removal tenfold.

FRUIT GARDEN.

Continue to give careful attention to the disbudding, thinning, pruning, and nailing of fruit trees as recommended in preceding weeks. *Strawberries*, plant out the strongest young runners as edgings, or in rows from 18 inches to 2 feet apart.

FLOWER GARDEN.

By regularly removing all dead flower-trusses and relieving the plants from superfluous and exhausted growths, their health and display may yet be prolonged. Borders deficient of Snowdrops, Crocus, Narcissus, and other early spring-flowering bulbs should have some introduced. Auriculas to be top-dressed, and if any are soddened with wet the drainage should be examined immediately. The young plants of Pansies obtained as cuttings or side shoots should be planted in good loamy soil well incorporated with dung. The sooner the Hyacinths and other bulbs for forcing are potted the better. The principal essential to success is having the pots filled with roots before top-growth commences; the bulbs to be selected for weight or substance in preference to size, and to be potted in half leaf mould or decomposed cowdung and half loam, with a sprinkling of silver sand. The quality of the soil is not of primary importance, as the flower-stalk will depend in a great measure upon the organised matter stored up in the bulb, and brought to perfection under the favourable influences of heat, light, and air. When potted to be placed in a frame or pit and covered with 6 inches of dry sawdust in preference to coal ashes. When the pots are filled with roots and the heads begin to sprout, they should be taken up and treated with a supply of heat, according to the time when they are wanted in bloom; but they grow stronger and bloom better when gently excited by heat and supplied with air.

GREENHOUSE AND CONSERVATORY.

The great business here will be to house the more tender sorts of plants in good condition; the pots to be rubbed clean and search to be made for worms when their casts appear on the surface of the soil. Sometimes the soil is so porous with worm holes as to necessitate repotting, which should be done at once. Any moss or weeds on the surface of the soil to be removed, and it should be fresh surfaced if necessary. In the case of large tubs or large pots, which are more unmanageable, an application or two of lime water will banish any worms that may be in them. When housed, all the air possible to be given in fine weather, even to the entire withdrawal of the lights, only reducing the ventilation when unfavourable changes in the weather take place. Each plant to be allowed sufficient space for the air to play freely around it. The Chinese Primroses to be shifted into the pots in which they are to bloom, in a soil composed of turfy loam, old cowdung, leaf mould, and silver sand; to be planted high to prevent the damping-off in the winter, and three.

small pegs inserted close to the plant to keep it steady in the centre of the pot; all blossom-buds to be nipped off as they appear until the middle of October. The Chrysanthemums to be taken up from the open ground, to be potted in any good soil, watered, and shaded for a few days. The system of growing them in the open ground saves a great deal of trouble in watering, and after all it is rare to see them in pots well feathered with foliage to the bottom; but in the open ground they require but the small attention of stopping occasionally, and when they are potted, even if left until the flowers are expanded, they will not lose a leaf. The principal and most desirable object in the management of greenhouse plants is to procure a robust and hardy growth, and at the same time to accommodate them to the changing influence of the seasons by lessening the vital action by free ventilation and by the gradual and judicious curtailment of water. Continue to shift Cinerarias, herbaceous Calceolarias, and other such plants for early spring flowering.

PITS AND FRAMES.

Pot-off seedling Conifers into small pots; however hardy, they derive much advantage from such nursing. Establish a good stock of Verbenas in pots as duplicates of the choicer sorts; harden-off cuttings for bedding-out next season, that they may resist the gloom of the approaching winter. The smaller the pot for merely storing a plant the better.—W. KRANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

Celery.—Planted out some more beds of nice young plants where we had a plantation of Peas. Only about 6 inches of soil were taken out and as much of rotten dung added, and well incorporated with the soil for 18 inches in depth. The plants, cleaned of suckers and turned out with good balls, will be useful next spring. The older plantations have now received enough of moisture, and are growing beautifully. See previous weeks.

Cucumbers.—Turned out some young plants in a pit where we can give a little hot-water heat when desirable. The heat is supplied from a saddleback which lost the most of one side two to three years ago, and we tinkered it with a plate of iron, without using a single screw or bolt. The mode was mentioned at the time. This season we found that the water escaped, and began to fear that the other side of the boiler had gone, but on examination found it proceeded from a leakage in the air-pipes where they joined the water-pipes. When these pipes have to be taken from pipes sunk for bottom heat, a stronger material is necessary than what is wanted for gas pipes, as the earth and moisture together soon oxidise them. For Cucumbers in frames, &c., see last week.

Capsicums.—Gathered a lot, and will leave a quantity for smoking purposes. We believe that the "pastils," such favourites with some people for the destruction of insects, have a good portion of Cayenne and saltpetre in them.

Dwarf Kidney Beans.—Transplanted a lot into pots, and placed under glass in a cold pit whence they could be moved when it becomes too cold. Sowed, also, a lot in boxes, to be transplanted into pots to bear in the beginning of winter. These are obtained with but little trouble. Have some litter in readiness to throw over Beans and Scarlet Runners if we have a sudden frost. A little litter one night will often save the crop for a month later.

Mushrooms.—We believe that the rains and the cool nights are bringing these plentifully in the open pastures. We like the cultivated ones best, as there is more certainty as to their wholesomeness. Our beds in the open sheds are white all over. Placed material for some shallow beds in the Mushroom-house. The material was half-rotten dung and fresh droppings, with a little litter, in equal proportions, and half a portion of chopped dry turf, and dry parings and sweepings from roads and walks, which, altogether, we feel confident will give us good crops. Examined bricks of spawn heating in a heap, which had been more exposed to the rains than we liked. Routine much as in previous weeks.

FRUIT GARDEN.

Took the opportunity of dry days to gather lots of Apples, as the previous dryness and the winds and rains were causing

many of them to fall. Placed the fallen ones by themselves for present use. Looked over some of those previously gathered, and removed all the least spotted for present use. Apples will be cheap this season, which will be a boon to the working man. The Kerry Pippin is now in fine condition, and the earlier Ribatons. Some fine specimens of the latter from small pots in the orchard-house were very firm, crisp, and high flavoured. Such was the verdict of those supposed to be good judges. We were a little in doubt about it ourselves. Williams's Bon Chrétien Pear has also been in good condition for three weeks, and will continue a fortnight longer. The gatherings from one tree, however, took place at seven or eight times. When gathered all at once it soon decays at the heart. Few Pears are more beautiful when taken in time. Early Pears and Apples are never better placed than on clean shelves. Late ones keep well in pots, jars, and barrels scarcely covered, but without anything among them. *Filberts and Nuts* are now mostly ripe. Those for present use may be laid on a shelf; those to be kept a little longer, in open narrow baskets pressed firm, but so that a little air can pass through them. To have them with the outer coverings pretty fresh in spring, we know of no better plan than drying them well in a sunny day, and then packing them lightly when thus dry in jars or large garden-pots, with the holes at the bottom well filled up, covering at the top with clean paper, and then placing a thick sod grass side downwards over the paper, and keeping the vessels in a place neither damp nor dry, but rather inclined to the former. We took the hint from the squirrels. We have turned out some of their stores in April, and found even the elegant outside covering as fresh as in the month of October. If these outside coverings become dried up, black, or unsightly, rendering it necessary for the hard nuts to be removed, the latter will keep best in small vessels with just the slightest sprinkling of fine salt among them.

Planting.—Preparations should be made for doing this in the case of fruit trees next month, by trenching the ground, or station-planting. Everything will succeed better if the fresh roots are working freely before winter. If before the heat gets out of the ground the surface is covered with long litter, the roots will be growing strongly all the winter; and the plants will need little of the water that spring-planted trees might require. As soon as the heat in the air in spring exceeds the heat of the soil, the mulching should be all removed, so that the sun may play freely on the surface of the ground. If that is apt to dry it too much the surface soil may be stirred a little, which will keep moisture in and extra heat out. The firmer the soil the more will the ground be influenced by heat and cold, and the looser the soil the less will it be affected either way.

Potato-pits.—We recollect a case in point which perplexed us a little in our boyish days. We helped to earth-up two pits of Potatoes. The Potatoes were covered with a layer of straw, and then by about 6 inches of soil, well trodden and beaten about the straw in both cases. Then in each case we put on 6 inches more earth, with a turf on the top of the circular cone. There was this difference, however, in one pit the outside was beaten as neatly and firmly as possible with a clean spade, and we were rather proud of our workmanship. In the other case the earth was piled on very regularly, beginning at the base of the cone, but no attempt was made to smooth it or make the outside firm. A severe frost set in, and the Potatoes in the firm and smoothed outside pit were injured, whilst those with the rough and more open outside escaped. A third party, whose pit was also smoothed outside, began to be alarmed, and scoured the ditches and sides of the road for old grass and tree-leaves, which he threw on to a thickness of 2 or 3 inches, and thus made all safe. This is just one of those cases in which the tidiest way of finishing a job may not be the best. In gardening an open surface may be valuable in summer and winter.

ORCHARD-HOUSE.

The greater portion of the trees, with the exception of late Peaches and Plums, having now finished bearing, we went over the most of those in pots, beginning with the Cherries, and lifted up all the pots which were plunged two-thirds of their depth, cut off all roots that were beyond the pots, and then set them back again, and gave them a good watering, so that they might feel it as little as possible.

This will arrest mere growth, and hasten the maturation of the buds and the falling of the leaves. It seemed chiefly wanted with a few Cherry plants, and if not done, we believe that some of the buds would ere long have burst into bloom or into a young shoot instead. One plant was missed last season by mistake, and was not moved until February, but it yielded no crop in comparison with the others, though it showed freely enough, but a great many flowers dropped at the setting. There was hardly time for the plant making up for losing these roots, and it would have been too vigorous and rampant for us without the operation being performed. There is, therefore, this advantage in having fruit trees in pots, that you can make short work of the root-pruning.

We generally, when fresh arranging every spring, place some rich compost at the bottom of each hole in which the pots are placed, as we think the roots that go outside tend to swell the fruit better when they have such material to work in. The breaking or cutting off these just now hastens and helps full maturation, and the roots are forced, so long as the green leaves remain, to work more energetically within the pot. The quantities of Cherries and Plums that may thus be produced is immense, and fine Peaches and Nectarines may also be obtained if the fruit is sufficiently thinned. The great drawback to such pot trees is the question of water, where that is scarce. We were forced to mulch the most of ours with old hay and stable litter, which gave a rather littery appearance to the trees, though it did us service as to keeping them in fair health with but a small modicum of water.

Top-dressing and Potting.—A number of our plants are in 8 and 6-sized pots, but many of the young plants are in 12's and 16's. The latter we will try and repot before the leaves wither much. Those in the larger pots we shall, as soon as possible, top-dress, by removing as much of the surface soil as we conveniently can with the fingers and a pointed stick, and filling up firmly again with rich fresh compost. Large Cherry trees may be grown in 4 and 6-sized pots, and may remain several years in the same pots if duly top-dressed and supplied with something stronger than pure water. When pots are much larger they are difficult to move about. A time may come after a number of years when the roots may become too stunted and too crowded; but in that case we would not hesitate to repot in similar sized pots, but in fresh soil, after shaking away, pricking away, or washing away all the old earth, root-pruning when necessary, doing this after the fruit was gathered and whilst the leaves were pretty green, and syringing or shading for a few days until the roots were taking fast hold. Such a case we would expect to bear well the following year.

Plants in good-sized pots will, however, be fertile and vigorous enough for a number of years, with the aid of the fresh top-dressing and a little stuff at the bottom of the pots. We may mention, however, that some of our best trees had scarcely emitted a root from the bottom of the pots; and but for the saving in watering, and saving the pots from a bright sun, such a pot might have done as well standing on a stone or plank as partly plunged in the earth.

Figs and Sewage Water.—Some pots of the Singleton and other kinds in the orchard-house that were not ripening kindly, we removed to a pit where they could have a closer and a warmer atmosphere. From plants in pots of White Marseilles, we had some very fine rich fruit, but some fell before reaching maturity, and the leaves acquired a brown appearance prematurely, which we attribute to giving them sewage water rather strong, and not being able to dilute or to follow with clean water. The sewage water contained a good deal of soap, and no doubt several alkalies, and our impression after watching the matter somewhat narrowly is, that Figs do not relish such nutriment, though they will find no fault with liquor moderately strong that flows from a farmyard or a dunghill. We were forced to give all these orchard-house pot plants more sewage than we liked, but we do not think any other things showed anything like dislike except the Figs. Even the Singleton has the little fruit browner than they ought to be. We like to see them light-coloured, cracking, and the rich juice standing like honey-drops. Would any correspondent give his experience of house-sewage water as applied to Figs? With us for two months it was pretty well sewage or nothing. Our impres-

sion is, that we should not like to use it so much in future for this class of plants.

Figs in the Fig-house, planted out, had the sewage more rarely, and have nothing of the brownish tinge on the leaves, though producing a heavy second crop, but which is coming lighter in colour than that of May and June. We shall thin the leaves and shoots to give more light during this and the next month, and then we will remove what fruit there is left, rest the house by exposure, in order that the leaves may drop, and then clean and fill with bedding plants for the winter, as after the end of October we do not consider a Fig worth eating.

ROOT-PRUNING OUT OF DOORS.

This is best done with any luxuriant tree immediately after the fruit has been gathered. The sooner it is done the more powerfully will it act in hastening the maturation of the buds, and thus producing fertility. The cutting of a tap root, and a few of the stronger roots, will often do wonders. It is best not to overdo at once. The operation is better performed in September than October. If the leaf is withered before the operation is performed, it is of little consequence when it is done until the buds swell, as it will tell little on the fruitfulness of the following year. If done early, and some fresh soil is packed firmly against the roots, and these roots begin to work kindly before winter, not only will the fruitfulness of the following year be promoted, but there will be vigour and energy enough to ripen the produce.

This will be the case with trees of moderate age, but when over-luxuriance takes the place of over-productiveness in trees ranging from twenty to forty years of age, the results of root-pruning, as we have proved, are less certain. Either if not enough done there is little improvement, or if too much done the trees continue too long in a languid state. In many such cases planting new trees in fresh soil, or changing the kind of the tree is the best remedy. In some cases raising the tree altogether, cutting the tap roots, saving all the horizontal ones, and fresh planting carefully, have done wonders with old trees that had become barren from over-luxuriance, or too deep planting, or from the gradual rising of the soil above the roots in old gardens.

Melons and vineries, &c., much the same as in previous weeks.

ORNAMENTAL DEPARTMENT.

Moving and Planting Evergreens.—The change of the weather gives a first-rate opportunity for moving evergreens and other shrubs by the beginning of the next month or the end of the present. Any of these that require the reduction or pruning-in of the head should be operated on without delay, as the juices will be more concentrated in the stems and roots, and will cause roots to be sooner predried. Shrubs root-pruned last season or in the beginning of spring will be easily moved now, as the ball will be matted with roots. Without that preparation the roots should be traced as far as possible whether a ball be obtained or not, and these roots should be kept moist and shaded, instead of being dried by the sun. When packed in their new position and secured, the roots should be moderately moistened, and the soil well firmed about them. This we consider of much more importance than inundating them with water; placing them, as it were, in a quagmire sufficient of itself to destroy all roots except those of marsh or ditch plants. The water will be most wanted over the foliage in a very sunny day, and perhaps one good watering with warmish water may be needed in spring. The roots will be much better from the time of planting all through the winter if the soil about them is just moderately moist instead of being at all swampy wet. A little litter over the ground, when the weather becomes cold, to keep in the heat will do more good than inundating with water. When much planting is done the littering may be out of the question; but after moistening the roots, and firming the soil well about them, we may leave the surface rough and open and as dry as we can. All that root kindly before arrested by cold will feel but comparatively little from the increasing heat of the sun next season. All things considered, October should be the great planting month of the year.

Lawns.—These are now beautifully green, changed as if by a miracle from a rusty brown. Rolled them well and machined them—almost the first time since the drought set in; and their carpet softness and refreshing green make

some amends for the flower-beds that are waning in their brilliancy.

Flower-beds.—Most of our Calceolaria-beds were tolerable until the heavy thunder showers of last week; but the ground being too dry to keep the energies of the plants active, the flowers were washed off by bushels. Even some splendid beds of Geraniums had many black umbels that were masses of colour the day before. These picked off and the verges dressed have left them rather gay still; but the beauty of the whole picture is so broken in upon by the green corymbs of Calceolarias without any flowers on them, that we are going on vigorously to complete our store of cuttings of Geraniums, Verbenas, &c. Most of what we take off now we place in small 60-sized pots, putting the cuttings thickly round the outside of the pot and none in the centre, and placing them in old Cucumber-frames for the present, where they will have a little bottom heat from removing the soil and stirring up the dung, with the addition of a little litter, and covering with ashes. Damp we will guard against by air-giving, especially at night. Some Stella Geraniums thus inserted in small 60-pots, some ten in a pot, are now in fuller bloom than those struck earlier. Verbenas thus managed will be far more certain than if old plants are kept. We are giving all the air possible to the Verbenas first struck.

Raised Beds.—Here we have noticed some anomalies worth mentioning. A correspondent spoke of beds level and sunk beneath the level, as securing the benefit of all the moisture given artificially, or even naturally. Nothing feels dryness more than Calceolarias, and we believe the best we now have is a ring round one of our pyramidal beds. No, we have made a mistake, the best is planted on the flat, on a raised bed some 2 feet above the lawn, the sides covered all round with Ivy. The sides are formed of rough wood rather open, and the Ivy covers all densely, and that may have had some influence in keeping the roots cool. We ought also to mention, that the Calceolarias were rather small when turned out, but were from cuttings made in the end of October. Some beds on the flat have now scarcely a flower, and those showing will come too late to do much.

In showery days opportunity has been taken to proceed with potting, washing pots, pointing stakes, making tallies, cleaning sheds up, and to spread out long litter that a little rain may fall upon it in order to cause it to heat when thrown together. The season has as yet given us a fair portion of heat. If not, we could not have helped ourselves by heat from fermenting substances, as we had no short grass to mix with the litter, and the dry litter that came from the stable we could do nothing with in the way of watering. We have turned and turned it, getting out every bit of dropping, and set aside a lot of the best for protecting purposes in winter. Our valuable rubbish heap looks small for next season from the same causes.—R. F.

TRADE CATALOGUES RECEIVED.

W. Wood & Son, Woodlands, Maresfield, near Uckfield, Sussex.—*Descriptive Catalogue of Roses.*

Fontaine et Duflot, 2, Quai de la Mégisserie, Paris.—*Catalogue of Bulbs, Strawberries, and Flower Seeds.*

COVENT GARDEN MARKET.—SEPTEMBER 24.

Both of fruit and vegetables the supplies are heavy. In Peaches and Nectarines there is a falling off, and Pines are just sufficient for the demand; but Grapes and Melons are very plentiful. The best two ripe Pears at present in the market are Marie Louise and Louise Bonne of Jersey. Apples are very abundant and in great variety; the best Ribston Pippins are those from Jersey. Of Lemons several parcels have lately arrived, and there has been a considerable fall in price. Large quantities of Potatoes continue to arrive both coastwise and by rail, but the demand is dull.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples.....	1	0	2	0	Mulberries....	0	6	1	3
Apricots.....	0	0	0	0	Nectarines.....	3	0	8	0
Cherries.....	0	0	0	0	Oranges.....	12	0	20	0
Currants, Red... 1/2 sieve	0	0	0	0	Peaches.....	3	0	12	0
Black..... do.	0	0	0	0	Pears (kitchen)...	5	0	10	0
Figs..... doz.	1	6	2	6	dessert..... doz.	1	0	3	0
Filberts & Nuts 100 lbs.	60	0	80	0	Pine Apples.....lb.	4	0	8	0
Gooseberries... 1/2 sieve	0	0	0	0	Plums..... 1/2 sieve	2	0	7	0
Grapes, Hamburgs lb.	1	6	4	0	Quinces..... do.	4	0	6	0
Muscats..... 3	0	7	0	0	Raspberries.....lb.	0	0	0	0
Lemons..... 100	8	0	14	0	Strawberries...punnets	0	0	0	0
Melons.....each	1	6	4	0	Walnuts.....bush.	14	0	20	0

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes.....each	0	4	0	6	Horseradish... bundle	2	6	0	5
Asparagus..... bundle	0	0	0	0	Leeks..... bunch	0	4	0	6
Beans Broad..... 1/2 sieve	0	0	0	0	Lettuces..... score	1	6	2	0
Kidney..... 1/2 sieve	3	6	4	0	Mushrooms..... pottle	1	6	2	6
Beet, Red..... doz.	1	0	3	0	Musht. & Cress, punnet	0	2	0	0
Broccoli..... bundle	1	0	1	6	Onions..... bunch	0	4	0	6
Brussels Sprouts 1/2 sieve	2	0	2	6	pickling..... quart	0	6	0	8
Cabbage..... doz.	1	0	2	0	Parsley..... doz. bunches	4	0	6	0
Capiscums..... 100	1	0	2	0	Parsnips..... doz.	0	9	1	0
Carrots..... bunch	0	5	0	8	Peas..... quart	0	0	0	0
Cauliflower..... doz.	0	0	0	0	Potatoes..... bushel	2	6	4	0
Celery..... bundle	1	0	2	0	Radishes doz. bunches	0	0	0	0
Cucumbers.....each	0	6	1	0	Savoy..... doz.	0	0	0	0
pickling..... doz.	1	0	3	0	Sea-kale..... basket	0	0	0	0
Endive..... score	2	6	4	0	Spinach..... sieve	3	0	6	0
Fennel..... bunch	0	2	0	0	Tomatoes..... 1/2 sieve	2	0	3	6
Garlic and Shallots, lb.	0	8	0	0	Turnips..... bunch	0	8	0	0
Herbs..... bunch	0	8	0	0	Vegetable Marrows doz.	2	0	3	0

TO CORRESPONDENTS.

* * We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

SEEDLING VERBENAS (F. A. S.).—Your collection of seedling Verbenas contains some very pleasing varieties; the colours are good, but not new, and the flowers deficient in form. General Simpson and Nemesis are the types of a good formed flower; Purple Queen, Model, Medina, Aurora, Princess Dagmar, were perhaps the best. We would advise your seedling specimens properly put up in a stand for the opinion of the Floral Committee at its next meeting.

PRESERVING WALKWORTH (E. P.).—They can be kept quite moist, and peel easily, if put into a pan and placed in a cold damp cellar.

LILIUM LANCEOLIFOLIUM IN A WINDOW (M. P.).—We presume it has flowered and the foliage is now decaying; if so, repot it now in a compost of turfy loam with a little leaf mould and well-rotted manure mixed with it, providing efficient drainage. Gradually withhold water after flowering until the foliage decays, when the stems should be cut down to the surface, and no water given except a little occasionally to prevent the soil becoming injuriously dry. You may stand the pot in a cool dark place until the foliage appears, when it will require to have light. It must be kept in the pot during the winter.

TRICHOMANES RADICANS CULTURE (C. R. H.).—Drain the pot to one-third its depth, and then fill up with chopped fresh sphagnum and pieces of brown peat in equal parts. On this place the plant, laying out the creeping rhizomes or stems on the surface, which should be pressed firm. Place pieces of sandstone on and between the rhizomes, not so as to cover them, but in part to maintain the plant in a proper position and for the roots to cling to. Sprinkle with water through a fine syringe night and morning in summer; but in the morning only in winter. Cover with a bell-glass sitting within the rim of the pot, tilting it on one side about half an inch at night, but keeping close by day; place the pot in a pan of water always kept full, and keep in a rather shaded part of a cool greenhouse.

PROPAGATING DOUBLE PETUNIAS (James Hurst).—1. We strike a number of cuttings in autumn, and obtain a stock from these in the spring for late blooming. Autumn cuttings bloom much earlier and are the finest in the months of June and July, whilst spring cuttings are superior for blooming in August and September. 2. Young plants bloom better, though not more profusely, than old plants; the flowers are larger and the foliage finer.

ROSES IN POTS (A Lady Subscriber).—You may have a fine bloom at Christmas. We do not think you will gain but lose by repotting the shrubs now; but as the earth is low and sodden, turn them carefully out of the pots, remove the drainage, and replace it by fresh, placing a layer of moss over it, and then the least portion of fresh compost so as to raise the surface of the ball to within half an inch of the pot rim. Keep in a light airy situation in the greenhouse, sprinkling with water twice daily through a syringe in bright, but in the morning only in dull weather and keep well supplied with water at the root. After blooming gradually withhold water, still keeping the soil healthfully moist until April, then place under a wall or in some sheltered situation, plunging them in coal ashes in May in an open situation. Repot in June, and prune in July, and by this treatment you will have Roses through the autumn months up to Christmas.

CROCUSES AND SNOWDROPS TO BLOOM AT CHRISTMAS (J. E. W.).—If you have clumps of these in the garden, take up the most promising and pot them in six-inch pots, in a compost of loam and a little leaf mould. Water, place in a cold frame, and keep there until the beginning of November; then place them in a cool greenhouse on shelves near the glass, and where they can have air daily. Keep well supplied with water, and in three weeks place on a shelf in a house with a temperature of 50° by night, with air daily, and in another fortnight if they be not sufficiently advanced for blooming at the desired time, increase the temperature to 55°. Air, light, and not too high a temperature are the essentials to success. See what is said about them in another page.

CURE OF A HIDEBOUNDED PEAR TREE.—You advised me this spring with respect to a Louise Bonne of Jersey Pear that was hidebouded, either to throw it away, which you seemed to recommend as the best course to pursue, or to keep it moist at the junction of the stock and graft with moss. I preferred trying the latter plan, as I have plenty of time on hand, and immediately set to work; and in addition to the moss heaped it well up with horse-dung, and occasionally watered it, so that it has been kept quite damp all summer. The effect has been almost magical, for the blistered places are fast disappearing; and although the blossom at the time I wrote for your advice had a very weakly look, the tree has borne an excellent crop of fine fruit, quite as large or larger than the largest of Jargonelles, so that I really have just cause to thank you heartily for your advice. The tree is a bush on the quince.—A. Q.

REMOVING DWARF PEAR TREES (Working Amateur).—You may transplant them now. Disturb the roots as little as possible; move them with a good ball of earth; wash in earth about the roots in their new locations; and stake them very securely to prevent their being wind-waved.

ALBERT EDWARD SEEDLING DAHLIA (B. W. K.).—Your seedling Dahlia is inclined to be coarse, the petals confused, and the colour dull. It may do well for the border, but requires delicacy, form, and colour to render it serviceable as an exhibition flower.

PRESERVING WALNUTS (A. G. L.).—The nuts becoming mouldy is of no consequence. Take them out of the green outer coat; wash them thoroughly; drain them, and put them into earthenware jars, and store as recommended to our other correspondent.

EYES AND NO EYES (Many Correspondents).—We have received so many letters upon this subject that we must decline inserting any more. It is enough that the hint has been given that employers "with an eye" like eyesores removed as soon as they occur; and those gardeners who have not pursued such a prompt course will do well to take the hint. We know of no first-rate gardeners who required the suggestion.

FRUIT TREES FOR LOW WALL (An Inquirer).—Your wall is very low—4 to 5 feet is too much so for trees to be trained permanently against them. On the north aspect Morello Cherries would do well; they are of weak growth, and may be trained laterally. On the east you might put Pears and Plums, selecting the less vigorous growers, such as Winter Nellis for the former, and Green Gage for the latter. On the south you might have Peaches.

FEWER BERGAMOT PEARS, &c. (G. J. M.).—It is impossible to say what variety you have under this name. There is no variety so named specially, and many have a French name attached. It certainly ought to succeed as a dwarf tree without a south wall. Gypsum is a good application to soil containing an excess of iron. Oak and Beech, we should think, would grow on your clayey land, but you do not say where it is situated. What would succeed inland will often fail on the coast.

MELONS SHRIVELLING (S. E.).—We are at a loss to tell what is meant by a Melon changing colour. Melons in houses require rather more moisture than those in hothed frames. When the fruit begins to ripen, which it will not take more than a week or ten days to complete, the atmosphere should be kept rather drier, but not so dry as to affect the foliage. We think your plants have been too dry both at the roots and top, and that the fruit not fully swelled has shrivelled for want of moisture. After the fruit is fully swelled and netted completely over no amount of dryness will cause shrivelling, and it will ripen if detached from the plant and placed in a suitable temperature. The soil in which the plants are grown should be kept moist at all times; but not so much so when the fruit is ripening as when it is swelling. The flavour is likewise improved by the atmosphere being kept drier during the ripening.

CALADIUM IN A GREENHOUSE (Ruby).—All the variegated-leaved kinds require a stove temperature, and cannot be grown well in a warm greenhouse, much less in one where fire is only employed to exclude frost.

VINES FOR A COOL VINERY (Idem).—You could not have a worse than Barbarossa, and we recommend you to plant Buckland Sweetwater instead. Esperone will do, and Muscat Hamburg is also good if a little heat be given; if not, Black Hamburg as a Black Grape, or White Frontignan as a White one, would be better. Black Prince will answer. Your inside border should be 3 feet deep—9 inches of brickbats and other rubble, and 2 feet 3 inches of compost. You may cover the border after the first three years with an inch of short manure every season, in February. The refractory Fuchsias we would not throw away, but take cuttings of it, and grow these on. Our correspondent says, "He has been in the habit of filling beds which may be vacant late in summer, with tops of Scarlet Geraniums in bloom, bordering them with Nasturtium shoots, watered once and then left to themselves." He adds, "They make a great show in autumn." We are obliged to you for the seeds.

LAUREL CUTTINGS (A Constant Reader).—They will mostly root if you take off the present year's shoots with a little of the old wood at the base, or a short heel, and insert them three-quarters of their length in ordinary garden soil, trimming the leaves off to that extent. They will nearly all root. The best time for this is the beginning of October, and they may then be put in close together, but not so as to touch each other. Portugal Laurels may be treated in the same way with a likelihood of success.

SEEDLING PELARGONIUMS WINTERING—DESTRUCTING WORMS (G. I. Q.).—The Pelargoniums will not do in the frame after this month, quite as much on account of cold as damp. In the absence of a better place you may possibly keep them over the winter in a window with a northern aspect, only do not water much, and prevent frost reaching them. Annuals for spring blooming should be sown rather thicker, and it is not necessary to thin them unless they are very close together. Lime water made by pouring thirty gallons of soft water on 12 lbs. of lime, well stirred, and allowed to stand for forty-eight hours, will leave a clear liquid which may be applied to Calceolaria seedlings if you wish to expel worms; but are you sure that the mischief is not done by slugs, as you speak of their being eaten up? Examine the plants a short time after dark, with a lantern, and you will, perhaps, find the enemy at work.

MUSCAT OF ALEXANDRIA NOT RIPENING—ACHIMENES NOT FLOWERING (Hafiz).—If the Barbarossa Grape ripens well, we think that the Muscat should be doing so likewise. Give the Muscat less air, more heat, and less water than the other varieties if the fruit is still so green. Being so healthy, we have no fear of its not ripening. We think the reason that your healthy Achimenes and Gloxinias did not bloom might be too much shade and too little heat, and that the rusty appearance is owing to the shade and dryness.

BOOKS (Jane).—We shall very shortly publish a work on Vine culture—it is now printing. Mr. Abbey's papers on Melon culture, recently published in this journal, give all needful directions. In the "Garden Manual," which you can have free by post from our office for twenty postage stamps, you will find directions not only for Rose culture, but Melon culture.

HEATING A SMALL GREENHOUSE (Calcaria).—For a house 16 by 9 feet we have no doubt that an Arnott's brick stove would be quite sufficient. To insure a propagating place in spring, it would be easy to have small bent pipes, say 10 inches in diameter, placed over or in the fireplace, with their ends communicating with a small wooden tank, covered with slate or plate iron. We do not think, however, we could give details more simple as to the building of them than we have frequently done. Since your tradesman sees so much difficulty, perhaps it would be as well to have a flue as you propose, passing along one end and front, and returning to the place from whence it started. It is of little importance whether the chimney is at D, above the furnace, or at X, a little distance from it. With a high chimney the flue may be on a level throughout. If the chimney is not high, 3 or 3 inches of a rise from near the furnace, after it takes the level in the house, on to the chimney, will cause it to draw better. As you want to use it also for propagating, we think that a common nine-inch flue will suit you best. If you wish to be economical, instead of having a space between the flues, one central wall would do for both flues—that is, three side walls instead of four. At the three turns it would be advisable to have soot doors, and then, when cleaning, you would not need to disturb the flue, and the brush could be run along it all the oftener. What you style your flow and return flue would thus present a surface of 18 inches when placed together. Above that you could have a latticed or other shelf for plants in summer; and that removed, you could use the whole of the top of the flue, and especially the end next the furnace, for a propagating-box or pit in the spring. The best way to do this would be to have small shallow boxes of the necessary width made of zinc, and so that a hand-light would go over them; or you could have wooden boxes, say 17 inches wide, bottomed with zinc, and 5 inches deep in front, and 8 behind, with a moveable glass lid, and in these you could regulate the heat to a nicety, move away when more coolness was required, and bring others when more heat was necessary for them. Even with the end of the flue next the furnace much might be done with a few of these little boxes, say 20 inches long, and the cuttings could be inserted in suitable soil in the boxes, or in small pots, to be filled and put in, and taken out when necessary. Such boxes would answer well for hardening off many things when they required no bottom heat from the flue. You would see lately how to have a hot tank from such a flue. The above would be simplest.

PROPAGATING PLANTS (A Young Beginner).—For twenty penny postage stamps you can have, free by post from our office, "The Garden Manual." It contains full directions for what you ask, and much more, which you, as a beginner, will be glad to learn.

FLOWER-BED PLANTING (Stella).—We would alter your circle bed and plant thus, beginning at the grass—1. Variegated Alyssum; 2. Lobelia speciosa; 3. Cloth of Gold; 4. Bijou; 5. Christine; and 6. Boule de Feu, instead of Trentham Rose. We think the Cloth of Gold will be more telling against the Lobelia than Bijou. If your plants of Bijou were strong, and the plants of Christine small, we would also change them, and this would range your variegated foliage better over the bed. If Christine is strong, plant as you propose. Trentham Rose will too much overtop Christine, and, therefore, Boule de Feu, or moderate-sized plants of Stella, would be better. To make a nice circle of all these six colours your bed for single rows would require to be 11 feet in diameter, or 10 feet at the very least—say 11 feet; then proceed thus:—Fix on the centre and draw a circle, with a line a foot in length, which will give a diameter of 2 feet. Plant that round with Boule de Feu, 9 inches apart, and then fill up the centre. This will give you a circle of fully 24 feet in diameter, as the plants grow, of scarlet. Then make another circle a foot farther down, and plant with Christine 8 or 9 inches apart. Then a third for Bijou, and plant about 7 inches apart. Then 10 inches farther down, another circle for Cloth of Gold, 7 inches apart; a fifth circle, 9 inches farther down, for Lobelia, and plant them 4 inches apart; and a sixth circle, 8 inches farther down, and plant with Arabis 3 inches apart. For double rows allow double room.

VENTILATING (Julia).—It is very advisable to have ventilation at the highest point of the roof of the conservatory. However, we have known plants do very well when there was little or no air given there if shade was afforded: otherwise the dry heat will be apt to call into existence shoals of red spider.

DESTRUCTING RED SPIDER AND THRIPS (Idem).—The means to be used will much depend on the kind of plants to be operated upon. Repeated smokings with tobacco will destroy the thrips, and repeated washings with water and sulphur fumes (not from burning the sulphur) will keep down the red spider. For particular plants, perhaps nothing is better than dipping the plants all over into a tub of size water, just sufficiently strong to be slightly sticky when placed between the fingers; setting the plants in a shady place for a couple of days, and then drawing the fingers through them. Afterwards dip the heads repeatedly in soft water at about 90°, and lay the plants down on a cloth or a mat, and syringe them well all over. Both insects, when they get ahead, are difficult to master.

DISEASED VINE-SHOOTS (Pampinæ).—We discovered no red spiders, but where they had been, and on both specimens we found about half a dozen small white thrips looking as if they had not been hatched long. Thrips and red spider are, therefore, no doubt your principal enemies, encouraged no doubt by dryness at the root of the Vines, and a dry bright sunny atmosphere. See answers to other correspondents. Watering at the roots if the border is dry, a moister atmosphere, and smoking where the Grapes are not too ripe, will be the quickest way of extirpating the thrips, and washing every open part of the wall with sulphur and soft soap, and coating the hot-water pipes or flue with sulphur, if not above 170°, will be the best thing for vanquishing the red spider, unless you can also wash the leaves of the Vines.

VENTILATING (Ignoramus).—We perceive nothing unsuitable in the mode of ventilating; but unless we knew more, we do not see the propriety of using Vines in pots in a house well filled with Vines, except for obtaining them a little earlier. We do not object to the Vines in pots being grown on a platform close to the front glass. Unless in extreme cases you will not need to whitewash the front glass, as the leaves will in general so overlap the front as to give shade enough. In the narrow upright houses at Trentham, the fruit was as near the front glass as yours will be, but no drawback was experienced on that account. The Vines in pots will do better if the pots are plunged. Muscat Grapes are dearer than other Grapes because they require more heat and more time to ripen them thoroughly.

INSECT-INVOLVED VINE (W. M.).—We found no insect on the Vine leaf, but plenty of proof that it had been nibbled all over by the thrips. If the Vines are nearly ripe, or July 30, your best plan would be to take off all the worst leaves carefully and burn them, and then sponge the others carefully with soap and water. At an earlier stage you might have smoked with tobacco; but if ripe the smoking is apt to taint the fruit. For the Muscat's shanking you can have no remedy now. Generally it proceeds from over-spraying, or deficient root-action; perhaps from the roots being deep in a cold, rich, wet border.

BONE DUST FOR VINE-BORDER (Pond-dau).—Spread the bone dust on the surface of the border, and fork it in, not disturbing the soil more than 3 inches.

CUTTING FURZE HEDGE (E. S.).—Whether you mean clipping or cutting down a furze hedge, the best time for the operation is in dry weather, at the end of February or early in March.

NAMES OF INSECTS (A Farmer's Wife).—The little beetle you have sent, as found in your bed-rooms, chairs, &c., is the *Pinus hololeucus*, now spread over a great part of England, but which we believe was imported into England from Russia about thirty years ago in a cargo of leather or skins. We do not think they breed in the Ivy; possibly their larvae feed upon refuse animal matters about the house. Their occasional appearance in great quantities in houses is, however, a mystery. The larvae of the *Pinus* generally feed on dry animal matter, whilst the *Anobium* (an allied group) feed on old wood. You would confer a benefit by hunting out the place of breeding of this species in its larva state.—W.

NAMES OF FRUIT (J. N. P. S.).—1, Achan; 2, Williams's Bon Chrétien; 3, Louise Bonne of Jersey; 4, Beurré Diel; 5, Beurré Duhaume; 6, Marie Louise; 7, King Edward's; 8, Comte de Lamy; 9, Marie Louise; 11, Ne Plus Meuris; 13, Beurré de Rance; 14, Conseiller de la Cour; 15, Grosse Calebasse. It is quite impossible for us to repack fruit sent to be named, and return it. (T. P. H. B.).—How can you have the conscience to ask us to name twenty fruits, and such a lot of bad specimens as they are? We have named all that are worth naming: 1, London Pippin; 2, Nonpareil; 3, Lemon Pippin; 4, Northern Greening; 5, Scarlet Nonpareil; 9, Winter Greening; 13, Royal Russet; 14, Yorkshire Greening; 15, Beurré de Rance; 17, Glon Moresau; 19, Pêche Colmar; 20, Beurré Bosc.

NAMES OF PLANTS (Sutton).—It is *Cotyledon umbilicus*, a common plant, not at all confined to Guernsey. (Georgy).—1, *Datura stramonium*; 2, *Buddleia Lindleyana*.

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

METROPOLITAN POULTRY SHOW.

I AM glad to see that one of your correspondents has breached the subject of a London poultry show. I feel certain that it would be successful if properly timed and managed.

The great success of the Birmingham Show has no doubt arisen from the fact that it is held simultaneously with the cattle show; and there can be no reason why a show held at a convenient place in close proximity to the Agricultural Hall at the same time as the Smithfield Cattle Show should not be a great success. The only thing wanted is a suitable building suitably placed, and there alone is the difficulty; but I fear it is an insuperable one.—P.

UTTOXETER EXHIBITION OF POULTRY.

THE Staffordshire Agricultural Society was first established in the year 1844, and, consequently, it has now stood the test of twenty years. For a considerable number of years past poultry has held an important position at its annual meetings; and if anything were necessary to prove how popular this portion of the display is, we can confidently refer to the absolutely thronged state of the very large tent in which the poultry was exhibited, and that from the very time of opening to the public, to its close. It must not, however, be for a single moment supposed that this remarkable influx of visitors gathered themselves within the tent devoted to poultry from any stress of weather: nothing of the kind, for, on the contrary, a more lovely, genial autumnal day could scarcely be imagined, and yet throughout the whole time the fair sex were carefully inspecting by far the best collection this Society has ever called together. We may truly say, that scarcely the most fastidious amateur could find a really bad pen among the whole, and we were pleased to hear that the entries were more numerous than ever. The situation of the show-field was a most suitable one, and the scenery was very extensive; whilst to render the day's pleasure even still more enjoyable, by the kind and ready permission of A. H. Vernon, Esq., the excellent band of the Second Derbyshire Volunteers enlivened the proceedings, thus adding very much to the gaiety of the scene.

We must now take a brief review of the various classes in the order they appear in the printed catalogue. Black-breasted and Brown Red *Game* fowls head the list. It was a matter of general remark, that not a single first-rate pen

of the latter colour was to be found, whilst the Black Reds were better than at previous meetings. The pullets in the first-prize pen were remarkably well-developed specimens, but the cockerel, to our ideas, appeared as though it had been over-run on its "walk" by an adult male bird. The second-prize pen were a remarkably Game-like-looking trio, but were evidently, though so well bred, wanting in strength and bone, had they been tested in the cock-pit. In the next class for Game of any other colour, a pen of Duck-wings stood first, but the cock was undoubtedly too light-coloured in the shoulders, and more leggy than desirable. This was one of the weakest classes in the Show, the entries consisting of only three pens. We now proceed to the *Spanish*, which were such as would add credit to any show. It is difficult to call to mind a better competition than ensued between the successful pens. The faces of the first-prize birds, though but little, if any, above half the age of their competitors, reminded us strongly of the pens of *Spanish* shown some years back by Mr. Peck, of Wigan. They were of extraordinarily fine quality, and as delicate in appearance as white kid. They were the property of Mr. Lamb, of Wolverhampton. Mr. Rodbard's second-prize pen were remarkably well-grown specimens, but the cockerel when two years old will be too much corrugated about the face for a first-class specimen. We now come to the *Dorkings*, which were not only very good, but remarkably early well-grown chickens. Some of the pullets in the class for Silver Greys were as good as any one could desire so early in the season. In *Cochins* the Show stood very high; and if we are to take those shown as evidences of the attention still paid to breeding them, the public taste for *Cochins* is even yet far from a bygone. Mr. Bates, of Harborne, cleared the board of all prizes in the Cinnamon and Buff class with birds of the highest merit and very true to colour throughout, the matching of the pens being also evidently well considered. Mr. Stretch here exhibited a most excellent pen for size and general characteristics, but of feather most difficult to describe. Their general appearance bespoke them to be bred from a cross between Silver Cinnamons and Buffs, as they partook of the peculiarities of both, but far from being true-feathered to either. Still they were remarkably good birds, and shown in faultless condition—lovely fowls to look upon at their present age, but will, if shown at two years old, be completely "grizzled." The dark *Cochins* were only represented by Brown birds, which are not nearly so attractive a colour as the Partridge-feathered ones. The *Hamburgs* were weakest in the Golden-pencilled class; but the Silver-pencilled and both the Spangled classes were most meritorious.

Turkeys were shown of excellent quality; and Mrs. Seamons of Aylesbury, quite astonished the inhabitants of the Uttoxeter district by a display of both *Geese* and *Aylesbury Ducks* that put everything approaching to competition in the shade. Throngs of visitors crowded around these pens the whole day. The first-prize *Geese* were Toulouse, the second were truly bred Embdens; and it was difficult to determine priority of position between them. The *Aylesbury* shown by this lady were just such as she appears always able to send out wherever good premiums are offered. The Rouen Ducks were not only a strong class, but also a very good one. A most unusual feature here was that there was not a single faulty-coloured-billed Duck throughout. A class for Buenos Ayrean Ducks produced great competition. It is, however, well for amateurs to bear constantly in mind that large size here is regarded as the very opposite of a desideratum, however perfect the feather. They should certainly not exceed the size of an ordinary Widgeon, and if smaller so much the better. Some capital White Muscovy Ducks, a pen of Guelderlands, and some excellent Negro or Silky fowls, as "extra stock," closed the rear of this excellent Show.

Every possible care was given to the birds, and we were much pleased to notice that, with one solitary exception, every specimen sent appeared in robust health. Although the railway accommodation to Uttoxeter is not anything like equal to that of the shows that were held respectively at Burton and Tamworth in preceding years, we are glad to find more money was taken at the doors.

GAME (Black-breasted and other Reds).—First, J. Bakewell, Draycott Mill (Black). Second, J. Stubbs, Weston Hall, Stafford (Black). Commended, J. Stubbs (Black).

GAMES (Any other variety).—First, Sir St. G. Gore, Bart., Hopton Hall, Wirksworth. Second, J. Holmes, Knowsley, Prescott (Duckwing).
SPANISH.—First, G. Lewis, Compton, Wolverhampton. Second, J. R. Redford, Aldwick Court, Writington, Bristol. Commended, T. Clift, Hanley; E. Fell, Burslem.

DORKINGS (Coloured, except Silver Greys).—First, J. Hill, Bladen Wood, Burton-on-Trent. Second, Sir St. G. Gore, Bart., Hopton Hall, Wirksworth. Commended, Mrs. M. Seamons, Hartwell, Aylesbury.

DORKINGS (Silver Grey or White).—First and Second, Lady Bagot, Blithfield Hall, Rugeley (Silver Grey).

COCHIN-CHINA (Cinnamon or Buff).—First and Second, H. Bates, Harborne Heath, Birmingham (Buff). Highly Commended, C. T. Bishop, Lenton, Nottingham (Buff); T. Stretch, Ormakirk (Buff).

COCHIN-CHINA (Brown or Partridge-feathered).—First, T. Stretch, Ormakirk (Partridge). Second, E. Tudman, Ash Grove, Whitechurch, Salop (Partridge). Highly Commended, E. Tudman (Partridge).

HAMBURGERS (Golden-pencilled).—First, A. Carter, Poulton-le-Fyde. Second, Rev. R. Roy, Bedwardine Villa, Worcester.

HAMBURGERS (Silver-pencilled).—First, J. Holland, Chesnut Walk, Worcester. Second, Sir St. G. Gore, Bart., Hopton Hall, Wirksworth. Highly Commended, W. Bradley, Diglis Leek, Worcester. Commended, H. Marshall, Cotgrave, Nottingham.

HAMBURGERS (Golden-spangled).—First, Sir St. G. Gore, Bart., Hopton Hall, Wirksworth. Second, J. Leech, Liverpool Road, Newcastle. Highly Commended, T. May, Bloomsbury Street, Wolverhampton.

HAMBURGERS (Silver-spangled).—First, Sir St. G. Gore, Bart. Second, E. T. Holden, Walsall. Highly Commended, J. Leech.

TURKEYS.—First, J. Coxon, Freeford, Lichfield. Second, Mrs. P. Wolfersham, Statfold Hall, Tamworth. Highly Commended, J. Faulkner, Breby Farm, Burton-on-Trent.

GAUSE.—First and Second, Mrs. M. Seamons, Hartwell, Aylesbury (White and Grey). Commended, J. Faulkner; J. Brasington, Barlaston, Stone (White).

DUCKS (White Aylesbury).—First and Second, Mrs. M. Seamons, Hartwell, Aylesbury. Highly Commended, W. H. S. Kynnersley, Brook House, Macclesfield, Uttoxeter.

DUCKS (Rouen).—First, J. Holmes, Knowsley, Prescott; Second, T. B. Hulbert, Perrott's Brook, Charnessey. Highly Commended, G. Pease, Southend, Darlington. Commended, J. Bakewell, Moor House, Uttoxeter.

DUCKS (Black East Indian).—First, J. R. Jessop, Beverley Road Hull. Second, F. W. Earle, Edenham, Farnham. Highly Commended, Sir St. G. Gore, Bart.

MUSCovy DUCKS.—Highly Commended, J. T. Fountain, Cowley Field House, Derby (Muscovy Ducks); Mrs. Hay, Sudbury, Derby (Gouldenlands).

The Judges were George Cargrey, Esq., the Cottage, Osmaston Manor, Derby; and Edward Hewitt, Esq., Eden Cottage, Sparkbrook, Birmingham.

MORLEY POULTRY SHOW.

THIS Show, held in connection with the Horticultural and Agricultural Exhibition, took place on the 19th inst.; and, notwithstanding a wet afternoon, was attended by thousands of people from Leeds, Bradford, Halifax, and the neighbourhood, all of whom appeared to take the liveliest interest in the Show throughout.

The Committee exerted themselves in a praiseworthy manner, and succeeded in making the Show a complete success, and everything passed off well.

The show of poultry was not large, yet in many cases the birds were of good quality. Of course the lateness of the season caused the adults to show disadvantageously. A nice Black Red Game stag, though a little too narrow across the shoulders, won first prize for cock of any breed, and a decent Brown Red cock was second. A fair pen of Brown Red chickens were first in their class, and a pretty pen of Black Reds were second. This position would have been reversed but for the cock in the second pen being slightly Duck-beaked. A good pen of Duckwing chickens won, and had the sectional prize for the best pen of Game fowls exhibited awarded to them. A capital pen of Silver-pencilled Hamburg chickens walked over, and had the sectional prize awarded to them. Bantams, though not numerous, were good in each class, and a capital pen of Black Red Game won the sectional prize. Spanish were very meagre, and, unfortunately, a very good pen of chickens, belonging to Mr. Cannan, were disqualified on account of being in the adult class. A good pen of adult Cochins, belonging to Mr. Beldon, won the sectional prize.

There was a nice show of Pigeons, and a few pens of Rabbits were exhibited.

COCKS (Any Distinct Breed).—First, T. Dyson, Halifax. Second, J. Sunderland, Halifax.

GAMES (Black-breasted and other Reds).—First, J. Fell & Sons, Adwalton. Second, H. Beldon, Bingley. **CHICKENS**.—First, H. C. Mason, Drighlington. Second, T. Dyson, Halifax. Commended, J. D. Newsome, Batley.

GAMES (Duckwing and other Greys and Blues).—Second, J. Fell & Sons. **CHICKENS**.—First and Second, W. K. Duxbury, Leeds. Second, J. Fell & Sons.

GAMES (Whites and Piles).—First, J. Sunderland. Second, H. C. Mason, Drighlington. **CHICKENS**.—Second, H. C. Mason.

GAMES (Black and Bram-winged).—**CHICKENS**.—First and Second, J. D. Newsome, Batley.

HAMBURGERS (Golden-spangled).—First, H. Beldon, Bingley. Second, G. Farnhill, Carlisle. **CHICKENS**.—First, T. Wilcock, Morley. Second, J. Witby, Farnley.

HAMBURGERS (Silver-spangled).—First and Second, H. Beldon, Bingley. **CHICKENS**.—First, H. Beldon. Second, J. Jowett, Morley.

HAMBURGERS (Golden-pencilled).—First, H. Beldon, Bingley. Second, S. Smith, Northwam. **CHICKENS**.—First, J. Sunderland, Halifax. Second, S. Smith.

HAMBURGERS (Silver-pencilled).—First, J. Sunderland, Halifax. Second, H. Beldon, Bingley. **CHICKENS**.—First and Second, H. Beldon.

POLANDS (Golden-spangled).—First, H. Beldon, Bingley. Second, W. K. Duxbury, Leeds. **CHICKENS**.—Prize, H. Beldon.

POLANDS (Silver-spangled).—First and Second, H. Beldon, Bingley. **CHICKENS**.—First and Second, H. Beldon.

POLANDS (Any other variety).—First and Second, H. Beldon, Bingley. **BANTAMS** (Gold or Silver-laced).—Prize, H. Beldon, Bingley.

BANTAMS (White).—First, C. Lister, Mirfield. Second, H. Beldon, Bingley. **BANTAMS** (Black).—First, H. Beldon, Bingley. Second, C. Lister, Mirfield.

BANTAMS (Any other variety).—First and Second, J. D. Newsome, Batley. **SPANISH**.—First, H. Beldon, Bingley. Second, W. K. Duxbury. **CHICKENS**.—Prize, H. Beldon.

DORKINGS.—First, H. Beldon, Bingley. Second, G. & S. Taylor, Hunslet. **CHICKENS**.—First, G. & S. Taylor. Second, R. Athey, Chapelthorpe. **COCHIN-CHINA**.—First and Second, H. Beldon, Bingley. **CHICKENS**.—First, C. Lister, Mirfield. Second, H. Beldon.

ANY OTHER VARIETY.—First, W. K. Duxbury, Leeds. Second, H. Beldon, Bingley. Highly Commended, C. Lister, Mirfield. **CHICKENS**.—First, W. K. Duxbury. Second, H. Beldon.

GAUSE (Light-coloured).—First, Second, and Special, W. K. Duxbury, Leeds. Highly Commended, J. Dawson, Morley.

DUCKS (Rouen).—First, J. D. Newsome, Batley. Second, J. Ward, Adwalton.

DUCKS (Aylesbury).—First, H. Beldon, Bingley. Second, W. Barnett, Holbeck.

DUCKS (Any other variety).—Prize, C. Lister, Mirfield.

TURKEYS.—Prize, G. Greenor, Middleton.

FARNS.—**GOOSE**.—First, H. Beldon, Bingley. Second, J. Firth, jun., Dewsbury. **DUCK**.—First, H. Beldon, Bingley. Second, T. H. Sagar, jun., Leeds. **TURKISH**.—First, H. Beldon, Bingley. Second, J. Firth, jun., Dewsbury. **BIRDS**.—First, J. Firth, jun. Second, H. Beldon. **TUMBLERS**.—First, H. Beldon. Second, T. H. Sagar, jun. **FANTAILS**.—First, M. Spedding, Dewsbury. Second, Naylor, Armley. **POWERS**.—Prize, H. Beldon, Bingley. **MUSC**.—Prize, M. Spedding, Dewsbury. **JACOBS**.—First, J. Bea, jun., Stump Cross. Second, J. Firth, jun., Dewsbury. **COMMON**.—First, M. Spedding, Dewsbury. Second, T. Barron, Morley.

RAMS.—Prize, Rev. W. Thorold, Middleton Parsonage.

The Judges were Messrs. R. Teebay, Fulwood, Preston; and H. M. Julian, Whitefriargate, Hull.

POULTRY AT THE DERBY AGRICULTURAL SOCIETY'S SHOW.

(From a Correspondent.)

THE annual Exhibition of the Derbyshire Agricultural Society was held at Derby, in the cattle market, on Friday September 16th. The poultry was not the least attractive feature in the Show, and the improvement in point of breed, as well as number, was very manifest, there being nearly one hundred pens exhibited.

In Coloured *Dorkings* Mr. Hill showed a very fine pen, the Countess of Chesterfield being second. Mr. Faulkner's Whites, which were the first at the Sparkenhoe Farmer's Club, well merited the same honour here, although there was none to oppose. *Spanish* showed very well, the first-prize birds being excellent, as well as the cock in the second-prize pen. The *Game* classes, as a whole, were very good. Mr. Spencer's Whites being everything that could be desired. In *Hamburgs* Mr. Campion's Silver-pencilled well deserved the honour they obtained. Mrs. Hunt carried off the premium for *Dorking* chickens, and the Countess of Chesterfield was second. Many of the *Game* chickens promised well. The first-prize *Cochin* pullets were splendid birds, but the cock was not their equal. Whites were second with a capital pen.

For *Rouen Ducks* there was no competition; but the second-prize Aylesbury were very large, though rather short of breed compared with the first. *Geese* and *Turkeys* were good, though the entries were few. Last, though not least, was Mr. Fountain's pen of White Muscovy Ducks, which deservedly received a high commendation as extra stock.

DORKINGS (Coloured).—First, J. Hill, Bladen Wood. Second, Countess of Chesterfield. Highly Commended, J. Hitchman, M.D., Mickleover. Commended, J. Faulkner, Breby Farm. **CHICKENS**.—First, Mrs. Hart. Second, Countess of Chesterfield. Commended, J. Faulkner.

DORKINGS (White).—Prize, J. Faulkner.

SPANISH.—First, J. T. Fountain, Cowley Field House. Second, H. Darby, Derby.

GAMES (Dark-breasted).—First, J. Bakewell, Dracott Mill, Sudbury. Second, W. Thorpe, Thulston. Highly Commended, G. Statham, Sudbury. Commended, J. Bakewell. **CHICKENS**.—First, Mrs. Hay, Sudbury. Second, T. S. Radford, Egginton. Commended, J. Milnes.

GAMES (White or Pile).—First, C. Spencer, Thulston. Second, J. Milnes, West Hallam. Commended, H. King, Melbourne.

HAMBURGERS (Gold-pencilled).—First and Second, P. W. Bowne, Bull Bridge, Crich. Commended, C. Spencer.
HAMBURGERS (Gold-spangled).—First and Second, F. Camp, Etwell. Commended, S. W. Cox, Spondon; J. Faulkner.
HAMBURGERS (Silver-pencilled).—First, T. Campton, Brailsford. Second, G. Statham.
HAMBURGERS (Silver-spangled).—First, Miss A. M. Hurt, The Knoll, Littleover. Second, Mrs. Hurt, Alderwasley. Commended, J. Langley, Mickleyover; H. Darby.
COCHIN CHICKENS.—First, J. T. Pountain (Buff). Second, H. Wallis, Derby (White). Commended, J. Hitchman, M.D. (Buff).
DUCKS (Rouen).—Prize, R. Cowley.
DUCKS (Aylesbury).—First, J. Faulkner. Second, J. Hitchman, M.D. Highly Commended, W. Harding.
GESE.—First, W. T. Cox. Second, J. Hitchman, M.D. Commended, R. Cowley, Bradwell; J. Faulkner.
TURKEYS.—First and Second, J. Brough, Langley.
EXTRA STOCK.—Highly Commended, J. T. Pountain (Muscovy Ducks).

MIDDLETON AGRICULTURAL SOCIETY'S POULTRY SHOW.—SEPTEMBER 22ND.

GAME (Black-breasted and other Reds).—First, J. Wood, Most House, High, near Wigan. Second, J. Fletcher, Stoneclough, near Manchester. Third, T. Dyson, Fellon Lane, Halifax. Highly Commended, Capt. H. Heaton, Lower Broughton, Manchester; J. Fell, Deighton, near Leeds; J. Firth, Lily Lane, Halifax. **Cockerels**.—First, T. Dyson. Second, J. Wood. Highly Commended, T. Statter, Stand, near Bury; J. Firth.
GAME (Any other variety).—First, J. Fletcher, Stoneclough (Pile). Second, E. Aykroyd, Birlington Road, near Bradford (Duckwing). Third, J. Fletcher (Duckwing). **Cockerels**.—First, H. Thompson, Milnthorpe (Pile, white legs). Second, W. R. Duxbury, Leeds (Duckwing).
GAME (Any variety).—Cup, J. Crossland, jun., Wakefield. Second, J. Wood, Halgh, near Wigan (Brown Red). Third, E. Aykroyd, Bradford (Duckwing). Highly Commended, J. Fletcher, Stoneclough (Pile); J. R. Rochard, Aldwick Court, Writington, near Bristol (Duckwing); J. Wood; H. Thompson, Milnthorpe. Commended, J. Bawn, Knowsley; T. Statter, Stand, near Bury; C. W. Brierley, Middleton; T. Dyson, Halifax; W. K. Duxbury, Leeds; Capt. Heaton.
SPRINGS.—First, E. Brown, Sheffield. Second, W. Cannan, Bradford. Third, J. Topp, Halesow Moor. **Cockerels**.—First, W. Cannan. Second, E. T. Holden.
DORKINGS.—First, J. White, Warlaby. Second and Third, E. Smith, Middleton. Highly Commended, C. W. Brierley. **Cockerels**.—First, S. Harrop. Second, J. White. **Pullets**.—First, E. Leech, Rochdale. Second, J. White. Highly Commended, E. Smith.
BRAMA POOTRA.—First and Third, H. Lacy, Hebden Bridge. Second, T. Statter, Bury. **Cockerels**.—First, T. Statter. Second, H. Lacy. Highly Commended, Mrs. M. Seamons, Hartwell. **Pullets**.—First and Second, H. Lacy. Highly Commended, E. T. Holden, Walsall; E. Leech.
COCHIN CHICKENS (Any variety).—First, T. Stetch, Ormskirk (Partridge). Second, Captain H. Heaton (Buff). Third, J. Nelson, Manchester (Buff). Highly Commended, C. Kershaw; J. Crossland. **Cockerels**.—First, C. E. Riddale. Second, Captain H. Heaton, Manchester. Highly Commended, C. Kershaw. **Pullets**.—First, Captain H. Heaton (Buff). Second, W. A. Taylor, Manchester. Highly Commended, G. H. Wheeler; J. T. Wellens, Middleton.
HAMBURGH (Gold-pencilled).—First, C. M. Roys, Rochdale. Second and Third, J. Fielding, Newchurch. Highly Commended, T. Wrigley, Middleton. **Cockerels**.—First, T. Burras, Wigan. Second, J. Preston, Bradford. **Pullets**.—First, J. Wrigley. Second, S. Smith, Northowram. Commended, Mrs. H. Sharp, Bradford.
HAMBURGH (Silver-pencilled).—First, J. Robinson, Garstang. Second, J. Preston, Old Bough, Ollerton, near Bradford. Third, H. Beldon, Gilstead, Bingley. **Cockerels**.—First, H. Charnock, Church, near Accrington. Second, D. Illingworth, Burley, near Otley. **Pullets**.—First, Mrs. H. Sharp, Bradford. Second, E. Smith, Middleton.
HAMBURGH (Gold-spangled).—First, T. Scholes, Chadderton. Second, J. Spigden. Third, J. Roe, Hedfield, near Manchester. Commended, T. Ogden, Chadderton. **Cockerels**.—First, J. Buckley, Tainton, near Ashton-under-Lyne. Second, Hepworth & Coldwell, Norridge, Holmfirth. Commended, Messrs. Saul & Co., Boarshaw. **Pullets**.—First, J. Chadderton, Old Lane, near Hollinwood. Second, J. Ogden, Chadderton. Highly Commended, J. Lancashire, Heaton.
HAMBURGH (Silver-spangled).—First, J. Robinson, Garstang. Second, Messrs. Saul & Co., Boarshaw, Middleton. Third, M. Isherwood, Bank Top, Radcliffe. Highly Commended, J. Fielding; J. Kay. **Cockerels**.—First, J. Lancashire, Tong Lane. Second, J. Collinge, Middleton. Highly Commended, J. Ogden, Middleton. **Pullets**.—First, M. Isherwood. Second, J. Hilton, Middleton. Highly Commended, T. Collinge; J. Lancashire.
HAMBURGH (Black).—First, H. Beldon, Gilstead, Bingley. Second, R. Battersby, Heywood. Third, J. H. Lord, Little Green, Middleton. Highly Commended, R. Goodwin, Middleton. **Cockerels**.—First, J. H. Gardener, Hollinwood. Second, J. H. Lord. Highly Commended, J. Hope, Oldham. **Pullets**.—First, E. Partington, Middleton. Second, R. Battersby, Heywood. Highly Commended, T. Jaques, Bottom Barrowfields, Middleton; R. Lancashire, Sandy Lane, Tonge.
ANY VARIETY (not included in the Classes).—First, H. Carter, Upper Thong, Holmfirth. Second, H. Beldon, Gilstead (Silver Polands). Third, W. Barber, Ovenden, near Halifax (Andalusian). Highly Commended, W. Fairbairn, Wendle, near Rochdale (Cuckoo Creels). **Cockerels**.—First, H. Beldon, Gilstead (Silver Polands). Second, S. Farrington, Chat Moss, Ashley, near Manchester (White-crested Black Polands). **Pullets**.—First, S. Farrington. Second, W. Barber (Andalusian).
BANTAMS (Game).—First, J. W. Morris, Rochdale. Second, J. Crossland, jun., Wakefield. Third, J. W. Morris. Highly Commended, J. Crossland, jun. **Cockerels**.—First and Second, C. W. Brierley, Middleton (Black Red and Brown Red).
BANTAMS (Any other variety).—First, C. Walker, Halifax (Gold-laced). Second, H. Beldon, Bingley (Black). Commended, T. C. Harrison, Hull. **Cockerels**.—First, H. Beldon (Silver-laced). Second, C. W. Brierley.
DOCKINGS.—First, J. Hartley, Rochdale. Second and Highly Com-

mended, Mrs. M. Seamons. **ZONES**.—First, J. Nelson. Second, J. Robinson, Garstang. Highly Commended, C. Moore; J. Robinson; E. Leech. **Any other variety**.—First, C. W. Brierley, Middleton. Second and Highly Commended, T. Statter.
GOULINS (Any variety).—First, J. Southern, Kenyon. Second and Highly Commended, D. E. Davis, Knutsford.
TURKEYS.—First, E. J. Wood, Manchester. Second, C. W. Brierley. Highly Commended, E. Leech; D. E. Davis, Knutsford.
POULTRY SELLING CLASSES.—First, H. Carter, Holmfirth (Black Polands). Second, R. Goodwin, Middleton (Black Hamburgs). Third, T. Burras, Abram, Wigan. Highly Commended, Miss A. Bamford.
Pigeons.—**Tumblers** (Almond).—First, H. Yardley, Birmingham. Second, P. Eden, Salford. **Carriers**.—First and Second, P. Eden, Salford. **Pouters**.—First, E. Brown, Sheffield. Second, P. Eden. **Jacobins**.—First, H. Yardley, Birmingham. Second, E. E. M. Roys, Rochdale. **Fantails**.—First, J. W. Edge, Birmingham. Second, H. Yardley. **Owls**.—First, J. W. Edge. Second, J. Walsley, Fallsworth. **Nuns**.—First, E. Clegg, Oldham. Second, J. W. Edge. **Any other variety**.—First, C. J. Samuels, Manchester (Trumpeters). Second, P. Eden (Barbs).
RABBITS.—First and Second, R. Anderson, Stand, Pilkington.

JUDGES.—**Poultry**: Mr. E. Teebay, Fulwood, Preston; Mr. J. H. Smith, Skelton Grange, near York. **Pigeons and Rabbits**: Mr. E. Slack, Newton Heath, near Manchester.

KNOTTY POINT.

POULTRY SHOW SWEEPSTAKES.

IN our Journal of the 30th ult., page 183, we gave the details of a case argued in the Suffolk County Court. The Judge of that Court, John Worlledge, Esq., delivered his judgment in the case on the 19th inst., and we have been favoured with the following copy of his judgment.

PAYNE v. J. DALLINGER AND WHISTOCK.

This was an action brought by Mr. Payne, who is managing clerk to Mr. Gudgeon, of Stowmarket, to receive from the defendants the small sum of 8s.; but though the sum be small, Mr. Payne alleged that the case involved a matter of principle, but to my mind it seems to involve a good deal more feeling than principle; but however that may be, I must decide it according to the best of my judgment.

The case arose in the following way:—On the 26th and 27th of May last, there was a poultry show at Woodbridge, under the auspices of the Suffolk Poultry Society, of which defendants were the Secretaries, and among the events, to use a sporting phrase, that were advertised to come off, was a sweepstakes for "Dorking Cocks," which was thus set forth in the programme of the Show: "Dorking cock class, a sweepstakes of 7s. 6d. each will be opened for Dorking cocks of any colour, the stakes to be disposed of (after deducting 5s. from each entry for hire of pens, &c.) in the same proportions as in the Game cock class." The plaintiff having a Dorking cock, of which I suppose he entertained a high opinion, entered him for the above sweepstakes, and at the same time remitted defendants the sum of 7s. 6d., according to the terms of the printed programme as shown above quoted. Mr. Payne entered his Dorking cock on the 7th of May, which was the last day for entries, and there was no other entry at all for the Dorking cock sweepstakes; but Mr. Payne had no notice of the fact, and in due time sent his bird to Woodbridge, where he was duly exhibited with other feathered bipeds then present. There being no other entry for the Dorking cock sweepstakes, the prize Mr. Hewitt awarded Mr. Payne. The prize in sweepstakes was 2s. 6d., and 2s. 6d. was accordingly sent to Mr. Payne by the defendants, and received by him. But Mr. Payne was not satisfied with that, and has brought this action to recover 8s. more, which I understand is thus made up—3s. for the expenses of sending the cock to Woodbridge, and 5s. the residue of the 7s. 6d. paid by Mr. Payne when he entered his bird. The first Mr. Payne contended he was entitled to recover from the defendants, because he said it was their duty as soon as they knew there was no other entry for the Dorking cock sweepstakes, to have given him notice of the fact, so as to have prevented the necessity of his sending his bird to Woodbridge, and that not having done so they were liable to refund to him the expenses of sending it; and the 5s. Mr. Payne claimed upon the ground that there being only one entry, there was, strictly speaking, no Dorking cock sweepstakes at all, and that, therefore, he was entitled to recover back the whole of the 7s. 6d. he had paid upon the faith of there being a sweepstakes.

Now, it is clear that all entries are made subject to the

rules and regulations of the Show, and, indeed, in the form of entry signed by Mr. Payne, it is expressly stated that his entry was so made. That being so, it is in my opinion a sufficient answer to Mr. Payne's claim as to the 8s., and there is nothing whatever in the rules and regulations requiring the defendants to give Mr. Payne the notice he contends he was entitled to, and, therefore, his case as to the 3s. fails. And with respect to the 5s., the residue of the claim, the following of the rules and regulations appear to me material to the decision of the case—viz., "All exhibitors will be required to pay 5s. per pen for each class exhibited, which shall include coops, food, attendance, &c." And Rule 10, "Persons entering poultry and failing to send the same to the Exhibition will forfeit the entrance for each pen, &c., so left vacant." Now coupling the rules I have quoted with the words in the programme of the Dorking cock sweepstakes (after deducting 5s. from each entry, for hire of pens, &c.), it is, I think, perfectly clear that of Mr. Payne's 7s. 6d., 2s. 6d. only was his stake in the sweepstakes, and that the remaining 5s. became absolutely and irrevocably appropriated to the hire of pens, &c.. The &c. being large enough and general enough to include, and probably also intended to include, a contribution to the general expenses of the Show; and the tenth rule also shows, in my opinion, that whether the birds entered were exhibited or not, the 5s. at all events were not to be returned, that being, in fact, the entrance fee for each entry.

Now, that being, in my opinion, the result to be deduced from the rules, it is quite unnecessary for me to decide the knotty point as to whether there was, in fact, a sweepstakes for Dorking cocks or not; because if there was, Mr. Payne won it, as was decided by the Judge of the Show, and has received the prize. If there was not, Mr. Payne has equally got back his stake—viz., the halfcrown, which is all that he was entitled to on the failure of there being any Dorking cock sweepstakes, if failure there was.

I think, therefore, the defendants have paid Mr. Payne all that he was entitled to receive under any aspect of the case, and the judgment of the Court must be for them; but as Mr. Dallen's letter* of May 30th was not exactly a fair statement of the facts, and was calculated to produce a wrong impression on Mr. Payne's mind, each party must pay their own costs.

Judgment for the defendants without costs.

* [COPY OF LETTER REFERRED TO.]

"Ecclesia Chambers, 30th May, 1864.

"DEAR SIR,—I enclose you 2s. 6d. in stamps for prize Dorking cockerel sweepstakes. There was only one entry, and we retain 5s. for the pen.

"Your cock had the privilege of competing with the Dorking cocks (Class 12) against Mr. Frost, Mr. Lingwood, and Mrs. Blair, but Mr. Frost beat you. We thought it only fair, as there was only one entry for sweepstakes, that you should be allowed to do so, and it was done, but without success.

"Yours truly,

"JNO. DALLENGER."

"Mr. H. Payne, Stowmarket."

TUMBLERS NOT FLYING.

ABOUT four months ago I purchased half a dozen high-flying young Tumblers, which when I turned out flew so high as to go out of sight, and they generally were about an hour before they descended; but since that they seem to have been gradually growing worse and worse in their flying, and now they never fly more than ten or fifteen minutes, yet I know that those belonging to the vendor fly for two or three, and sometimes four or five hours without alighting, and he said that mine would do the same when they grew older. Will you tell me the reason of their not doing so, and the remedy? I only let them out once a-day, and sometimes not at all, so that it cannot be through having too much liberty. Last week I shot half a dozen commoner ones for the table, and they being in very good condition, I thought perhaps I might be feeding the Tumblers too well, so I gave them less food, but as yet it has made no difference.—A SUBSCRIBER.

[I think that you allow your flying Tumblers to associate with common Pigeons, and as the old proverb asserts, "Evil communications corrupt good manners," your Tumblers learn to imitate the habits of the common birds. I would advise you either to kill off all the common Pigeons, or to keep them confined until the Tumblers have had their daily

fly. If your Pigeons are too fat more exercise will reduce them to proper condition. Weather permitting, make them fly every day, and keep them to it until they are again in good training, and then be careful that they do not relapse into idleness. They cannot be fed too well when they are in training, and have regular daily exercise. Peas, Indian corn, and lentils, are variously recommended as the best food for flying on, and a little hempsed just at starting; but the Pigeons must not be turned out too full. You will, perhaps, have some trouble to make the Pigeons keep up at first, but you must not expect to succeed unless you attend them regularly.—B. P. BRENT.]

WINTERING A CUCKOO.

I PERCEIVE one of your correspondents is very anxious to preserve through the winter, alive and in health, a young cuckoo which he has reared this summer.

I have not myself any fear that this may be easily effected by proper care, as I, when a youth, kept both the cuckoo and the corncrake the year round. I had both when quite young. The cuckoo I fed at first on raw meat and boiled eggs, of which it always ate ravenously during the time it was in my possession—viz., until the 26th of April, being very nearly a year old. It then escaped by the neglect of a servant, its health and plumage being perfect, for, singularly enough, it moulted to adult feather during February.

The meat it preferred was either sheep's heart or sheep's kidney cut into moderate-sized pieces, of which it consumed considerable quantities. Until the November of 1828 it had the free range of a large back unoccupied attic. Severe weather then setting in, this bird was placed in a throstle's wicker cage near the fire in the kitchen, and as it at that time seemed very listless and drooping, possibly in part from being more closely confined, it was then supplied with an occasional treat of "mealworms" from a flour mill in the neighbourhood. The moment it saw mealworms it ate heartily, however disinclined to motion previously. The dull habits of this bird continued only during the really cold months of winter, for in February it was again set at liberty in the room with its old companion the corncrake, and flew about as happily as ever. During the whole time it was in my possession it never once uttered the well-known cry from which it takes its name, but frequently when flying about the room made the exceedingly rapid monotonous noise, customary to this bird at spring time, when flying in the open country. They are a very objectionable bird to keep on account of the nature of their excrement.

The corncrake was a truly lively and most interesting pet, and was so young as to be only covered with black down when I obtained him. He was at first fed on chopped eggs, boiled hard, mixed with cheese and meat, and eventually he went on well with chopped bread and cheese alone. He was always in motion, for his hearing was so singularly acute that to approach him without his knowledge was impossible. I kept him nearly three years, and he almost invariably "craked" before rain. He was jokingly called my "weatherglass," and mostly proved a very correct one. He had a turf of grass whenever it could be readily obtained, and was especially fond of grasshoppers and woodlice, and would leave any other food to seize a stray mealworm, if by chance his cuckoo-friend happened to let one fall. He was a great favourite of all the family during the whole time we had him, and never evinced the sullen disposition of the cuckoo, for he would follow us when spoken to—in fact he seemed determined to cultivate acquaintance with every one. His plumage was, except at natural intervals of time, of as brilliant a character as though at liberty, and strong were the expressions of regret, when one morning he was "found dead" without any apparent indisposition beforehand.—EDWARD HEWITT, Sparkbrook, Birmingham.

MANAGING BEES ON THE NATURAL SYSTEM.

SOME time ago you were good enough to insert a letter of mine on the subject of bee-keeping, wherein I expressed my intention of abandoning the "scientific" system for a more

natural one based on the habits and instincts of the bee. It will interest your readers to learn from my experience how they may turn a general disappointment into a pleasurable and profitable amusement.

The great feature of all controversy on the subject is how to prevent swarming. To this end all kinds of elaborate hives have been invented, books written, plans proposed, and controversies engaged in. My four-years experience with Neighbour's, Taylor's, Stewarton, and other hives convinces me that it is impossible to prevent swarming except by one method, that of cutting out the queen's cells—a difficult, delicate, and, to inexperienced or timid persons, dangerous operation. So strong is the colonising instinct, that all the plans of space and ventilation that can be adopted will not retain the swarm at home if queen bees are allowed to be hatched; whilst the adoption of such plans invariably results, as far as my experience goes, in injury to the young bees and the retardation of the honey crop. The fact that swarms issue from large hollow trees, garrets, church roofs, &c., where additional accommodation for comb-building is amply provided sufficiently proves the point that by giving space you cannot prevent a swarm from issuing. Having once made up my mind on the subject, I abandoned the system, the constant results of which had been lost time, lost honey, and continual annoyance.

The experience of most amateurs is, I venture to think, one of similar disappointment. I have adopted what seems to me a more natural and sensible plan. I now encourage swarming, hive the swarms, unite them if 'casts,' let them work all the summer, and in the autumn take the honey, destroying such hives as I think too weak for the winter, leaving strong stocks from which only supers have been taken for next season's supply. I also avoid as much as possible, in contradiction to my previous mode, interfering with the bees. They regulate their own temperature and time of swarming far better than we can do; and they will work to greater advantage if not inspected and intruded upon too much in the honey season.

Acting on these principles, the following is my result for 1864. From five stocks I have had eight swarms, one of which I gave away; another, after being hived in a Stewarton, took wing and settled in an old pollard; and two casts I united. From No. 1, an old stock, after two strong swarms had issued, I took 4½ lbs. of honey, and destroyed the bees, as I wanted to change the comb. From No. 2 I took a super of honey weighing 11½ lbs. From No. 3 I took 15 lbs. Nos. 2 and 3 swarmed together; and so large was the united swarm that I was obliged to put on a super the same night. From these boxes I took 36 lbs. From No. 4 I took a large super with 20 lbs.; and from its prime swarm, which I have since destroyed, I took 18½ lbs. Two casts from Nos. 3 and 4 were united in July, and having been lately fed, now form a strong stock for next spring. From No. 5 I took 11 lbs., and destroyed the old stock, keeping its prime swarm. I have just destroyed the swarm from No. 1 in the tree, and obtained 16 lbs., making a total of 132½ lbs., whilst I retain five strong stocks amply provided with food for the winter.

Part of this success arises from the season; but the chief result has arisen from my allowing nature, with a very little assistance from art, to have its own way.—A BEE-MASTER IN ESSEX.

FOUL BROOD IN YORKSHIRE.

I SEND you herewith a small box containing a sample of comb taken from one of my hives. I fear there is little doubt of its being virulent foul brood, but shall esteem it a favour if Mr. Woodbury will kindly inform me whether it is so.

The stock was driven late last autumn into a Woodbury hive, and had to be fed. This spring I found four of the combs covered over with fungus, and completely deserted by the bees. I removed these, but found no brood in the cells, but only mouldy pollen. I supposed that they were fed too late to seal over the cells, and that evaporation in the winter had caused the growth of mould.

They have since increased in numbers, but have not swarmed, nor yielded any honey; and to day, on examining

the combs, I found brood in nine frames, some of the cell covers perforated, others not so, but nearly all with flattened tops, and containing brood more or less decomposed.

In the same shed I have a Ligurian swarm of May, this year, which has done very well, yielding me a super of 25 lbs. of fine honey. I am very sorry to find that it has received the infection, though at present it exists to a much smaller extent than in the other stock.

Should Mr. Woodbury's verdict bear out my fears, I propose to unite the bees of the two stocks with the Ligurian queen, which is a fine one, and drive them into a hive with empty comb in it, giving them three days quarantine in an intermediate-hive, and then feeding them for the winter. Will this be my best course? and shall I need to confine the queen longer than the workers, at this season of the year?

I have also enclosed a sealed queen cell which I took from a hive belonging to a friend, which has swarmed twice, and since been robbed and deserted. It appears to be empty; if so, have the bees sealed it over again after the queen has left, or what has become of the royal larva?

Is the honey from diseased stocks fit for human food, and if not to what use can it be applied?—C. D.

[I regret to say that the sample which accompanied this letter is unquestionably foul brood, and I should think of a very virulent type, since I never saw any that presented a worse appearance, whilst it appears to have communicated itself by infection to a neighbouring stock.

If "C. D." either possesses or can procure another healthy stock to which he can give the Italian queen, I should advise his doing so, and destroying both the diseased colonies, in preference to attempting their union and cure by the means he describes; and for these reasons—the cure of foul brood is always very uncertain at the best, and at this advanced season I fear the chance of success would be small indeed. Added to this, there is so much difficulty in uniting Ligurian to common bees, that I believe the Italian queen would run quite as great a risk during the fusion of the two diseased colonies, as she would by being placed at the head of a healthy stock of common bees. I therefore consider it better to follow the course which I have pointed out, and by which the hope may be entertained to entirely get rid of the disease.

Honey taken from foul-breeding stocks may be safely eaten, or made use of for any other purpose, except that of feeding bees.

I believe a queen had hatched out of the royal cell sent, but the cell cover, remaining attached on one side as by a hinge, had closed after the departure of its tenant, and thus appeared as though it had remained perfectly intact. This is no very unusual occurrence.—A DEVONSHIRE BEE-KEEPER.]

OUR LETTER BOX.

LEO WEAKNESS (*Subscriber*).—Your Cochin-China cockerel, being a heavy bird, showing weakness in his hooks, may recover from that in the course of another month or two. Feed chiefly on bruised oats, give bread soaked in beer two or three times weekly, and four grains of citrate of iron daily until the bird shows more strength in his legs.

WRIGHT OF A DORKING COCK (*W. S. P. B.*).—As a rule, a Dorking cock is making satisfactory growth when he weighs as many pounds as he is months old. If, therefore, yours has made 6 lbs. in four months, he is unusually good. It is quite unimportant that he has red earlobes. Feed him generously, and let him have his liberty.

BUTINO BANTAMS (*Idem*).—The proper time for buying a Silver Sebright Bantam hen is when she is clean moulted, about two months hence. The surplus stock of most breeders is sold next month. A good hen is always worth twenty-five or thirty shillings.

CAPONISING (*W. R. C.*).—We know of no book that treats on caponising. The custom has so much fallen into disuse, that there are few, or no men, who can perform the operation. It is not worth doing. The sufferings of the birds, the numbers that die, and the inferiority of the birds compared with young cockerels, which may be made as large, while they are younger and more delicate, have caused the practice to be discontinued.

PACKING EGGS FOR TRANSPORT (*A. J. H.*).—The proper way to pack all eggs intended for sitting is to use moss. Cover the bottom of the basket with it, roll up every egg separately in moss, so that it is completely enveloped, then put it in the basket, small end downwards. Fill up in this way till there is room for no more. Then put a layer of moss again, and pack another row of eggs. Continue till the basket is full, and be careful to top up so tightly that no egg shall move out of its place whilst travelling.

IVY NOT POISONOUS TO SHEEP, &c. (*E. J. J.*).—Sheep eat Ivy with impunity. The Duke of Richmond at Goodwood, and Mr. Kilman near Lewes, have first-class flocks of Southdown sheep. Clipping the wings of hens has no bad influence on their laying powers. Age reduces that power.

WEEKLY CALENDAR.

Day of M th	Day of Week.	OCTOBER 4—10, 1864.	Average Temperature near London.			Rain in last 37 years.	Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock after Sun.	Day of Year.
			Day.	Night.	Mean.	Days.	m. h.	m. h.	m. h.	m. h.		m. s.	
4	Tu	Slows ripe.	64.1	43.7	53.9	18	8 af 6	29 af 5	51 9	0 7	4	11 24	276
5	W	Common Reed Grass ripe.	68.3	41.5	52.4	18	9 6	27 5	54 10	42 7	5	11 42	279
6	Th	Maple and Beech leaves fall.	62.0	44.3	53.1	21	11 6	25 5	52 11	31 8	6	11 59	280
7	F	Birch leaves become golden.	62.6	44.4	53.5	18	13 6	23 5	after.	31 9	7	12 16	281
8	S	Poplar and Cherry leaves fall.	61.4	42.0	51.7	19	15 6	21 5	30 1	37 10	8	12 33	282
9	Sun	20 SUNDAY AFTER TRINITY.	60.5	42.7	51.6	20	16 6	18 5	9 2	50 11	9	12 49	283
10	M	Hazel leaves turn yellow.	61.5	43.8	52.7	22	18 6	16 5	43 2	morn.	10	13 5	284

From observations taken near London during the last thirty-seven years, the average day temperature of the week is 62.2°, and its night temperature 43.2°. The greatest heat was 80° on the 4th, 1859; and the lowest cold, 28°, on the 5th, 1850; 8th, 1852; and 9th, 1849. The greatest fall of rain was 1.06 inch.

HARDY FERNS:

HOW I COLLECTED AND CULTIVATED THEM.—No. 1.



ANY years have passed away since my intense love for the vegetable world centered itself in "hardy Ferns." I loved them, not because they were the fashion, but because they pleased me—pleased me in a manner that even wild flowers failed to do. I think one reason for this was that I felt the study of Ferns was within my capacity, I could, as it were, measure the length and

breadth of what was necessary for the knowledge required—no hard books, no very unpronounceable names; but what was far better, I saw in the distance long walks in pleasant places with cherished friends, a little speculation, a little argument, and a great deal of innocent enjoyment. Then the habits of the Ferns pleased me; the tall graceful Lady Fern hiding herself away in some sequestered nook—the hardier Filix-mas shooting up tall and straight, proud of its strength and size—the pleasure-loving little Septentrionale basking in the very eye of the sun—the shy Ruta-muraria scorning any home or companions but those of its own seeking, and quickly pining away in a land of strangers—the Scolopendriums reveling in their rich variety of form, each with a separate charm, yet together forming one of Nature's loveliest groups.

So I brought to the study of Ferns a lover's heart, and like other lovers I have had many ups and downs in following the fair objects of my choice, and my huge Fern-book stands like a gallery of departed mistresses, each labelled with the fond name of a wild imagination; a diminutive frond of *Lastrea dilatata* appears boldly as "Dryopteris!" unmitigated Filix-mas does duty as "*Lastrea cristata*!" *Oreopteris* alone is right. Oh! what happy days does my old Fern-book recall!—what pleasant wanderings by banks and braes, by rock and river! Each Fern has its own separate existence in my memory. I see once more the little brawling Gwendryth, from whose banks I drew my *Dilatata* to flaunt for a time under its fictitious character; I hear the hearty welcome of the Welsh tailor, whose weather-beaten cottage stood beneath a weeping Birch tree by its side, where the poor fellow earned a scanty living for his consumptive wife and many children. From that first visit my mind travels to the last; the gentle voice is hushed, the poor bed of straw empty, and lying in an inner room on a flower-bestedred coffin is the patient sufferer at rest for ever. The Welsh poor are like none other; I have wandered

amongst many people, been greeted as a friend by many, but never so gratefully, so gracefully, as in the lowly cottages of Wales.

My first *Oreopteris* was found in a wild mountain spot a few miles from Chepstow. I went in search of it with a frond from a true plant in my hand. I remember the search as if it were but yesterday—how gallantly I plunged into the Devil's Punch-bowl, where, I was told, the *Oreopteris* drank the dew of heaven! how diligently I crushed every Fern I found there, till the sweet lemon scent that escaped told me my search was over, and that the frond in my hand, with its tidy rows of spore-cases, guarding the leaflets like rows of little soldiers, and its bleached-looking stalk, was my favourite *Oreopteris*. There are many common Ferns to be found about Chepstow and the beautiful banks of the Wye. I found the *Ceterach*, *Asplenium trichomanes*, divided forms of Hart's-tongue, &c.; but I also found Tintern Abbey, that most perfect of all English ruins, and Raglan Castle, and I would say, Let no man think he has seen a sunset till he has seen one from the tower of Raglan. Yet it is a cockney sort of sunset! for it is pointed out to you with the utmost precision, every shade of colouring expatiated upon, till you turn away with an angry feeling as if some one had spoken of your own beauty in a rude unfeeling manner; yet for all that, one looks in a glass again, and I hope to see a sunset from Raglan tower once more.

From Chepstow I passed on to South Wales, where for several months I carried on my somewhat wild researches much as a mariner without a compass might do; but my "ignorance (most certainly) was bliss," and by the magic wand of imagination each day's discoveries were transformed into gems of rarest value. I have never altered these fictitious names in my book, they bring me such happy memories of bygone days; they are a journal in which nothing but scenes of beauty and pleasure are recorded. This frond was gathered at Dynevor Castle, put aside for the minute while I hammered away at the rocks; for I carried on a little desultory wild geology as well as botany, and Dynevor is a famous place for both. As I look at this *Asplenium ruta-muraria* I am once more scrambling down the old broken mud wall, strongly savouring of pigs, where it had made its home, far down to some famous sand-burrows from which I gaze on the treacherous Cefn Sidan stretching far out into the blue waters towards Tenby. As I watch I see two vessels bearing down on each other; they pass and seem to pause; a boat is lowered from both, and then I see the smaller of the two vessels slowly sink down lower and lower till only her mast is above the sea. I hasten home, and after a while of suspense hear the good news that no life was lost.

Another Fern takes me to a Welsh wedding, where I had been "bidden" by a printed invitation in these words:—"As we intend to enter the matrimonial state on Thursday, the 9th day of June next, we are encouraged by our friends to make a BIDDING on the occasion, the same day, at the young woman's father's house, in the village of L—, at which time and place the favour of

your agreeable company is humbly solicited, and whatever donation you may be pleased to confer on us then will be thankfully received, warmly acknowledged, and cheerfully repaid whenever called for on a similar occasion, by your obedient servants, David Jones, shoemaker, and Hester Morris." What a wedding it seemed to be, as I gazed for a few minutes on the soberly merry scene! What an incongruous heap of presents the bidding had collected—chairs, tables, a clock, cups, jugs, pots and pans! What a Babel of voices! and what dancing! Nothing rude or boisterous but the fiddle, which gave spasmodic attempts to be jocund only ending in a growl, to which one young dancer after another trod a sedate and solemn measure, while the elders exclaimed, "Look! see what a grand dance! Yes, yes, it is fine." Thinking the "Sasseneg" might be a hinderer of mirth, I departed.

This frond of *Asplenium marinum*, measuring 1½ foot, I consider the gem of my old book; it bears a look of learning about it; it reminds me that at this time I invested half a guinea (its then price), in Moore's "Popular History of British Ferns," and that it has been quite worth its cost to me. In the local distribution of *Asplenium marinum* I found mentioned, "Cliffs between Tenby and Saunderson's Foot." I tremble when I think of those cliffs. Armed with a bamboo 15 feet long, with a knife tied on the end, I sallied forth one day in search. By using the utmost dexterity the bamboo was carried safely over the ferry; but the land passage was not so easily accomplished, the retreating tide leaving, not sand or shingle, but huge boulders of slimy stones and rock, covered with various Algae, each more inimical to walking than the other, while little pools of water with tiny crabs in them seemed lying in wait at every step. I measured the bamboo with my eye, and grasped it fairly in the middle, but now its head would entangle itself in the seaweed ahead, its poor body starting up like an overstrained bow, threatening to precipitate me backwards; and now it would bury itself in the sand, from which, at an unwary jerk, it flew madly in the air, dancing the knife about in dangerous fashion.

Yet, how beautiful was that coast! Cliff after cliff broken into every fantastic form, with masses of trailing plants adorning them, and here and there, high and dry, a bit of sand from which poor dried-up grass issued, sent, as it seemed, to bear the tender weight of pink and white *Convolvulus*. The white ripples of the retreating tide returned for a moment to gaze upon the intruders, while far overhead a solitary bird went sailing into the blue distance, sending forth a plaintive cry to its lost fellows. And in some little cave amidst this unbroken solitude I was to see for the first time my friend *Asplenium marinum*, and at last I found it! A damp dripping cave it was, with no bit of dry rock to promise a safe perch if the waves caught you; steep cliffs around with no escape; but hanging here and there above my reach, even with the bamboo, I saw the long shining sprays of the beautiful *Macinum*.

But how to get at it?

Mounting as high as I dared on a tiny ledge till hat and chin peered over the projecting rock, steadying myself with one hand, with the other I hoisted up the bamboo, and began a sort of sky fishing, making desperate jerks to reach my object, when suddenly there boomed on my ear like a cannon, "Bless my soul, madam, you'll be killed! Hold on till I come." But who was "I?" Just rounding the cliff came a little boat, and in it a gentleman, a lady, and a sailor. Stout and ruddy against the blue sky showed the pair as I sighted them over the point. The "situation" was not exactly happy, but with a firm hold I was master of it. The party landed. The gentleman bowed, and asked leave to take my place; but even then we were but a few inches nearer the Fern. Then the sailor came, and, like Caesar, saw and conquered. "Yes, yes," he said. "Sure she's high, but I'll get her. May I stand on your shoulder, sir?" In a moment the boatman was on the stranger's arm, clinging to a scrap of rock. A spring, and he was safe on a ledge, securing root after root of the desired treasure; and thus I became possessed of the first living specimen for a fernery that has been my pleasure for ten years.

The little party in the sea-cave gathered round the Fern, feeling we could hardly admire it enough, with its black shining stipes, its simply pinnate frond—not stiff, as in cul-

tivated specimens, but with a waving curve of dark bright green on which the light glinted—its fructification (it was autumn), rich, full, and brown, traversing from either side of the mid-vein of the pinnule to the serrated outer edge.

After due examination, the sailor took a "cordial" from our pic-nic flask, jumped into his boat, and the party, so strangely brought together in pleasant fellowship in that lonely spot, parted for ever. I planted the roots in pots half full of drainage, and I have them now as green and beautiful as then. In looking at them I often wonder whether there still exists in another English home one of the trophies of this day, of which a gentleman says in a jolly voice, "That, my love, is the Fern I found the day I saved the lady's life in the Welsh cave;" and whether the rejoinder remains, "My dear, you were very foolish, and it was the sailor!"—*FILIX-FEMINA*.

ANNUALS AND BULBS FOR GARDEN DECORATION.

THE time is drawing near when there will be a blank in the flower garden from the removal or destruction of its summer occupants, unless prompt measures be taken to replace them by plants calculated to do away with the dreary aspect which the beds too frequently present in winter, spring, and early summer. The flower garden can be made interesting from the appearance of the Snowdrop to the blooming of the Rose; in winter, by a discriminate use of small or miniature evergreen shrubs; in autumn by the preparation of the beds for bulbs and other spring-flowering plants; in spring and early summer, really beautiful by means of a variety of plants.

It is high time to sow seed of the following annuals for flowering in the ensuing spring, and as the beds will not be ready for them for some time, it is advisable to sow rather thinly in a sheltered situation, and, if possible, on well-drained ground. If the soil is poor and light a dressing of leaf mould an inch thick, spread on the surface and neatly pointed-in, will benefit the plants. Prior to sowing tread the surface firm if the soil is at all light and sandy; but if tenacious in character treading will not be required. It is necessary to have the soil firm that the plants may make fibrous roots, so that they can be removed with a close ball. It is also certain that seedling plants withstand frost much better in a firm than in a loose soil, and they are there stronger and more dwarf. Having levelled the surface and sown the seeds thinly, but rather more thickly than in spring sowing, only just cover them with very fine soil. If all go on well they will be up in a few days, when a vigilant watch must be kept on the seedlings to prevent their destruction by slugs. A little soot sprinkled around them will do much to prevent the ravages of these; but the best plan is to search for them at night with a lantern, and the next best to dust a little quicklime over the plants at dusk in order to kill the depredators.

If the winter prove mild all will do well and be of sufficient size to transplant into their blooming quarters when the first mild weather occurs in March. Take them up with good balls and plant them thickly, consolidating the soil about their roots. Water copiously if dry weather ensue, and thin the plants if they stand too closely; but this will rarely be necessary, the difficulty being to obtain enough of them to cover the surface densely.

To provide against accidents and to fill up blanks, it is advisable to sow a quantity in pots and afford them the protection of a cold frame, admitting air freely on all occasions, and protecting only in severe weather, when a covering of mats will do much to keep off frost, and if the mats be left on until the plants are thawed the injury sustained will be much less. To preserve the roots the pots should be plunged to the rim in coal ashes. Those who have room may keep them on shelves near the glass in cool greenhouses, and if an early bloom is desired they may be potted in spring and allowed to flower in the greenhouse. They should be transplanted to their final quarters if wanted for flower-garden decoration by the beginning of April. Light loam and leaf mould in equal parts form the most suitable compost. The seeds should be sown from the middle of September to the beginning of October, that being the latest period. September is the most suitable month.

The following are the annuals that I have found really useful for the decoration of flower-beds in spring, and although all of them do not flower sufficiently early to allow of their being employed, yet the majority answer the purpose on an average of seasons:—

- Alyssum maritimum* (Sweet Alyssum), flowers white. 6 inches.
Calandrinia speciosa, pink. 1 foot.
Campanula carpatica, blue. A perennial and not suitable for bedding, but valuable for borders; and so is *Delphinium formosum*, blue.
Campanula Loral, blue; and its variety, alba, white. 1 foot.
Clarkia pulchella, Tom Thumb, rosy pink. 6 inches.
C. pulchella, in variety. 1½ foot.
C. pulchella compacta. A smaller variety of the common kind. 9 inches.
Cochlearia acaulis, blue. 6 inches.
Collinsia bartelmefolia, purple; and *Collinsia bartelmefolia* alba, white. 1 foot.
Delphinium cardiopetalum, blue. 1 foot.
Erysimum Peroffskianum, orange. 1½ foot.
Eschscholtzia californica, yellow. 9 inches to 1 foot.
E. crocea, yellow; and *E. crocea alba*. 9 inches to 1 foot.
Euboridium grandiflorum, reddish purple. 1 foot.
Eutoca viscidula, blue. 1 foot.
Gilia nivalis, white. 9 inches.
G. tricolor, tricoloured. Collectively a bad white or grey. 1 foot.
Godetia tenella, purple. 1 foot.
Gypsophila muralis, pink. 6 inches. This is only half hardy. Sow in a frame.
Iberis umbellata (Candytuft), in variety. 1 foot.
Kantusia amelloides, blue. 9 inches.
Leptochloa aurea, golden yellow or orange. 3 to 6 inches.
L. nana, yellow. 6 inches.
L. densiflora, purple. 9 inches to 1 foot.
Limnanthes Douglasii, yellow and white. 5 to 7 inches. This does better sown in autumn than in spring. The white variety is excellent.
Lupinus nanus, blue; and its variety alba, white. 9 inches.
Malcolmia maritima, red; and its variety alba, white. 6 inches.
Myosotis palustris aurea major, blue and yellow. 6 to 7 inches.
Nemophila insignis, blue. 3 to 6 inches. This sown in autumn does much better than when sown in spring. It makes a charming bed.
N. maculata, white, spotted purple. 6 inches.
Oenothera prostrata, yellow. 6 inches. Makes a good bed throughout the season.
Saponaria calabrica, pink; and *Saponaria calabrica* alba, white; blue. 9 inches to 1 foot.
Schizanthus Prieiti, white. 1 foot.
Shene pendula, rose; and *S. pendula alba*, white. 6 to 9 inches.
Venus's Looking-glass (*Campanula speculum*), blue and white varieties. 6 inches.
Veronica syriaca, blue and white. Makes rather a pretty edging.
Vicaria oculata nana, pink; and its variety, alba, white. 1 to 1½ foot.
Whitevia grandiflora, purple. 1 foot.

In point of utility for flower garden decoration I can only accord annuals a secondary position, as they are uncertain in their time of flowering, and cannot be depended on to survive the winter, at the same time it would not be just to say that they are of little value, though it must be admitted that they are vastly inferior to early-flowering spring plants and bulbs. Of flowering plants for spring decoration I shall have something to say by-and-by.

BULBS FOR FLOWER GARDEN DECORATION.

For the most part all hardy bulbs are easy of cultivation, needing no particular soil or preparation beyond that required by hardy plants in general. Bulbs of all kinds, however, thrive best in soils that are free from stagnant water, and which are moderately rich and porous. No general rules can be laid down as to the successful cultivation of the whole; but some hints on that of each genus may be of service.

SNOWDROP.

Simplicity and modesty are the peculiar charms of this lovely flower. It will grow almost anywhere, but prefers a free open soil, particularly if containing decayed vegetable matter, such as that found in woods not too much encumbered by brushwood. It will also bear almost any amount of ill treatment, and it is not unusual to see it transplanted when in full flower, and be but little injured. Such treatment, however, cannot be recommended.

Ground intended to be planted with this bulb should be dug or loosened to a depth of from 9 inches to a foot, and if a little leaf mould can be spared to mix with it so much the better. Immediately after the foliage decays take up the roots and divide them, sorting out the large from the small bulbs, it being a good plan to have three sizes—large, medium, and small. The large bulbs will answer perfectly for the most conspicuous places in the flower garden; the medium-sized will do for mixed shrubby borders in open spaces, either in front of evergreens or under the shade of deciduous trees; and the small may be planted in woods, by the sides of walks, and in parks, a clump here and there, which will add additional beauties to such places. When-

ever the Snowdrop is taken up it should be planted the same day. It is a native of Britain, and as such is not benefited by the drying process. It is only plants from warmer climates that are improved by drying, which promotes the ripening of the bulbs—a process which cannot be accomplished in our cold damp soil.

They may be planted as margins to borders in lines about 6 inches from the edging, drawing a drill with a hoe 3 inches deep, and placing the bulbs in this at an inch apart in a double row, allowing 3 inches between the rows, and in quin-cunx fashion, so that the first row may be 4½ inches from the edging, pressing the root end into the earth, and then covering with soil to a depth of 3 inches. In the same manner they may be planted as margins to flower-beds; but if the lines are curved the distance between the rows should not be greater than that between the bulbs, or from 1 to 1½ inch. Double rows are much more effective than single, and treble rows better still. The foliage will usually be sufficiently decayed to allow of the Snowdrops being planted at the time of preparing the beds and borders for their summer occupants. Snowdrops may remain in the same place for a number of years, annual removal doing the greatest possible injury to these bulbs, and all others from cool climates. If removed more frequently they should not be planted so deeply, from 1½ to 2 inches being sufficient covering; but when left for years they annually get nearer the surface, and unless top-dressed will ultimately throw themselves out of the ground, for under cultivation they are deprived of the annual deposit of vegetable matter which in nature enables a plant to exist on the same spot for generations. I was particularly struck with this on planting several roots under trees, from the ground beneath which the leaves were annually removed, and others in a spot where leaves and herbage were allowed to remain. They were all planted at nearly the same depth, but at the end of seven years the bulbs in the former situation were level with the surface, whereas the others were no nearer it than when first planted. In planting, therefore, in dressed ground, it is not necessary to remove them oftener than once in seven years, unless they have increased to such an extent as to throw each other out of the earth or become irregular. The medium-sized and large bulbs are those best calculated for planting in clumps of twelve or more together, at from half an inch to an inch apart. The small, planted in woods, on hedge-banks, or any other suitable place, will in time gain strength and afford additional charms to such spots.

Dried bulbs should be planted if possible in September, and not later than October, in order to secure a good bloom. They may be planted close to the stone edgings of beds, and in all beds and borders, without infringing on the space allotted to Crocuses, Tulips, &c., and they do not interfere in the least with the summer planting of the beds or borders.

The single Snowdrop (*Galanthus nivalis*), is the most graceful, usually commencing to bloom in January—never, so far as I have seen, before that time; the double-flowered (*Galanthus nivalis flore pleno*), succeeds it. *Galanthus plicatus*, or the Crimean Snowdrop, is double the size of our common English species, and possesses the same exquisite purity of colour, flowers at the same time, and has broad leaves, and flower-stems 9 inches or a foot high. It is a welcome addition to our earliest spring flowers, and must find its way into every garden.

I must now advert to what I consider a valuable acquisition—namely, *Colchicum alpinum*, a very dwarf kind from the Swiss Alps, roots of which, imported last autumn, remained in bloom the whole of the winter, even during the frost. The flowers are of a pale rosy purple, several rising from one root. It is probable that its winter-blooming properties may be impaired by our more temperate climate; but should it retain them, it will be valuable as being one of the few flowers of midwinter.

WINTER ACONITE.

This is a charming early-blooming plant, rising to the height of about 6 inches, producing, when in a mass, a blaze of golden blossoms. It requires the same treatment as the Snowdrop, and should be in every garden. I once had charge of a garden where there was a tall screen of Lime and Elm trees, and a walk between them, and on each side was a yard of single Snowdrop, another of Winter Aconite

(*Eranthis hyemalis*), a third of double Snowdrop; and this walk, when the majestic arms of the trees were crusted with hoar frost, and there was just a sprinkling of snow to whiten the ground, had a splendid effect, especially when the sun shone. The Winter Aconite flowers in the months of January and February, and frequently in March.

CROCUS.

Neat, dwarf, compact in growth, the Crocus ranks as one of the most beautiful ornaments of the flower garden. Like the Snowdrop, it may be planted so near the margin of beds as not to interfere in any way with the other occupants. It is so varied in colour as to be charming in beds or borders, either in lines of one colour in ribbon borders, or in concentric rings in beds; and nothing can exceed the beauty of a border planted in clumps of one colour, or of several blended together, especially when associated with Hepaticas, and particularly the pink one.

Crocuses are usually planted in October, November, and December; but I should be guilty of misleading my readers were I to say that such is the most suitable time. It is ill treatment to dry Crocuses at all, for they are not improved by the process, nor, as I said before, is any bulb that will endure our climate, and become sufficiently ripened. To do the Crocus justice, it should not be removed more frequently than once in three years, and must then be planted the same day. They like a rich, open soil, not necessarily dry, but free from stagnant water. Planted in lines, they should be inserted to a depth of 2 or 3 inches, and at a like distance apart. In clumps of six or more they are very pleasing. The bulbs in this case need not be more than an inch apart. The Crocus does not grow under trees so well as either the Snowdrop or Winter Aconite, owing, I think, to its growth not being perfected before the shade of the trees deprives the foliage of light to a great extent. It should, therefore, have an open situation; but at the time of re-planting it is desirable to plant only the largest bulbs in the most prominent positions, reserving the smaller for places of less importance. The most suitable time to transplant Crocuses is immediately after the foliage decays.

I have no wish to depreciate imported Crocuses, for I find that they furnish larger blooms than those of English growth; and I wish to impress on the minds of all that finely as imported Crocuses flower the first year, they will, if not disturbed, improve in beauty, not for the next year only, but many succeeding seasons. Imported bulbs should be planted in their quarters as early in autumn as the places can be got ready for them.

The Crocus, after being grown in the same soil for a number of years, becomes weaker. To obviate this, a portion of the old soil should be removed, and its place supplied by a quantity of fresh rich soil. A dressing of rotten manure spread over bulbs early in autumn is not lost on the roots beneath, and such attentions should be more frequently given than they are.

Very fine beds may be formed by planting a double row of Mont Blanc, white, 6 inches from the edge; 6 inches from that again a double row of Prince Albert, blue; then at a like distance Dutch Crocus, yellow; a fourth of La Majestueuse, striped; a fifth of Othello, dark violet; and Giant Yellow in the centre. This will be splendid for a circular bed 7 feet across. For a border 6 feet wide we have the first row, 6 inches from the Box or other edging, a double one, white, Queen Victoria; the others being—2, Cloth of Gold, yellow; 3, General Garibaldi, purple; 4, Aletta Wilhelmina, white, flamed violet; 5, New Large Yellow; 6, Vulcan, deep purple. The second row is 1 foot from the first, and so on, early Tulips being planted between each. Again we have a border 12 feet wide, which is to be gay in early spring. Such will hold twenty-four rows, and we can have it first-rate by planting, beginning at the edge—1, Queen Victoria, white; 2, Captain Cook, purple; 3, Cloth of Gold, yellow; 4, Argus, violet, white margin; 5, David Rizzio, dark purple; 6, Sulphureus, brimstone yellow; 7, Mont Blanc, white; Prince Albert, purple; 8, Large Yellow; 9, Cloth of Silver, white, purple stripes; 10, Ne Plus Ultra, blue, tipped with white; 11, Yellow Dutch; 12, Princess of Wales, dark purple; 13, Caroline Chisholm, white; 14, New Large Yellow; 15, Albion, blue, white and blue striped; 16, Van Speyk, feathered blue and white; 17, Saffron; 18, Lord Raglan, dark

blue; 19, Diana, white; 20, Cloth of Gold; 21, Lilaceous superbus, light violet, white margin; 22, Versicolor, white, with purplish veins; 23, Large Yellow; 24, Grande Vidette. Planted in this way, a border of Crocuses is not to be rivalled; and to a true lover of nature there is no finer sight on a bright spring day.

Now as Crocuses are only temporary, or destined to give place to other flowers at a more advanced period of the year, it becomes necessary to remove them with balls in the last week in May, planting them again in an open situation in the reserve garden, giving a good watering, but none afterwards. In autumn they may be retransplanted to the places previously occupied, at latest by the beginning of November. They will bear this treatment better than might be expected; but a system which I have adopted with more success, is to plant the Crocuses in double rows (I do not like single), the first 6 inches from the edge of the bed or border, and the next a foot from it, and so on, which leaves space between for planting early Tulips, and these come off in time for bedding plants to be put in their places, without disturbing the Crocuses. The Tulips look no worse for having a line of the loveliest foliage between the rows, but are improved; and thus we do justice to the Crocuses, and have a bloom from early spring until a late period, when they are replaced by other plants not more beautiful than their predecessors.

(To be continued.)

G. ABBEY.

TRITOMA UVARIA—GLADIOLUS.

FROM remarks made by gardeners who visited various places in the latter part of the past summer, coupled with what little observations I have been enabled to make myself, I should certainly think that very ornamental plant, *Tritoma uvaria*, has lost the high position it held in the last and preceding years. The expectation then formed of it was, that it would take a place amongst the tall bedding plants, or, perchance, a row of it would be found occupying a site where Dahlias, Sweet Peas, or the taller Tropæolums had previously done duty; but, whether from the dry summer, or from some other cause not sufficiently understood or accounted for, the flowers of this plant in most places seem to have been few indeed up to the middle of September, and the condition of the plants such as to leave little hopes of their making much display this autumn. That this is in a great measure to be attributed to the dry weather I fully admit, but I am far from certain that such is the only cause, as in my own case the plants in spring seemed to be in anything but a promising condition; many of them had died during the winter, and I find on inquiry that other growers had in a like manner lost a great portion of their stock, and as this could not be from the lack of moisture at that season, some other reason must be assigned for the failure of this popular plant, which, whatever may be its merits, is certainly not an early bloomer.

It would, however, be premature to condemn it for not succeeding better in a dry season like the present, but its failing during the past winter can hardly be attributed to the same cause, especially as we are told that the plant is one of the hardiest we have. Be this, however, as it may, the *Tritoma uvaria* of 1864, seems to have lost the position it occupied in the preceding years, and the quantity of flowers is likely to be much less than we have had for several seasons.

I believe it is admitted that this *Tritoma* likes a damp situation, possibly the side of a brook or ditch, where the soil is open, or, perhaps, inclined to peaty sand. A stiff clayey soil is too likely to produce slugs, which prey upon this plant, and I expect that last autumn, which was unusually mild, favoured these destructive vermin, and to their voracious appetites I fear some of our winter losses are to be attributed. One thing at all events is certain, the plants did disappear, and as severe weather did not set in until the first week in January, these marauders may be fairly charged with a part of the blame; but if, on the other hand, this plant has suffered from any of the other causes by which other classes of plants are affected, some further inquiry ought to be made into the matter. Perhaps other growers who have been more fortunate will kindly record the circumstances to which their success is attrib-

able, and any other particulars relating to this highly popular plant, so that where local circumstances will permit of the mode of cultivation being varied, we may look for success with somewhat more of certainty than we can at present.

While on this subject, I may mention that at most of the places to which I have been this summer, the *Gladiolus* has done well, and those we have here have flowered abundantly and strongly, and retained a better foliage than usual. Even in the dry weather of August they seemed not to lack any of the freshness which was so woefully absent in other things, and from this we may infer that the *Gladiolus* hardly requires hand-watering, nor yet a dripping summer to do well, but simply wants bright sunny weather. Of course, it need hardly be stated that this hastens the decay of the bloom, as well as its production, and that those who want a prolonged display must, therefore, adopt some shading process. The condition of the plants, however, in the present autumn, and their past success, augur favourably for another year; let us hope that the *Tritoma* may also raise its head in a more prominent manner next season than it has done this, and that a like failure may not occur again. If any one who, by a different mode of culture, has succeeded this season would record his practice in *THE JOURNAL OF HORTICULTURE*, he would confer a great benefit on others, who, like myself, are far from satisfied with the result of this year's growth.—J. ROSSON.

LEAN-TO ORCHARD-HOUSES.

1. WHAT do you consider the best height for the back and front of a lean-to orchard-house, so that a narrow path might be made round the front for a man to squeeze along in pruning?

2. Do you think it a good plan to raise the back border 2 feet?

3. Will 14 feet wide hold four rows of trees when matured, with a two-feet path in the middle, and one of 18 inches in front?—A. Q.

[It is impossible to gain every advantage by any one mode of building a house. The low-fronted houses, as Mr. Rivers's lean-to's, are no doubt the cheapest. Our orchard-houses this season have been pictures of health and fertility. The garden-wall existed previously, it is 11 feet in height, width of house 11 feet, height in front $3\frac{1}{2}$ to $3\frac{3}{4}$ feet, according to the slope of the ground. There are trees against the back wall, and 5 feet from it a row of trees in pots, and a second and third row near the front, just leaving enough of room for a man to get along stooping. The whole of the back of the house as well as the front is supplied with dwarf temporary plants in the spring, for keeping and hardening-off. The trees used may be kept much the same size by pruning, or if allowed to grow larger, a less number of trees will do. If heavily cropped some will be exhausted prematurely. Our pathway now is latticed wood 18 inches wide. With a house at all moderate in height, there is no occasion for sinking the pathway. That was done to obtain headway in a low house and thus secure economy.

In your fourteen-feet-wide house if no walls now exist, and West Houghton is far enough south, you might make a span-roofed house easiest—say 5 feet at sides and 10 feet at apex, the half of the 5 feet glass, and a walk down the middle, with a bed for two rows of trees on each side. If you resolve on a wall and a lean-to, then we would have the back wall at least 12 feet in height, and the front from 4 to 6 feet, the latter height if you want a comfortable pathway in front, the former if you are satisfied to pass along as you can. Then for internal arrangement we would advise you to have trees planted out against the back wall, and no other trees in the house for from 5 to $5\frac{1}{2}$ feet from the wall, and these should not be allowed to be above 5 or $5\frac{1}{2}$ feet in height. This opening at the back of $5\frac{1}{2}$ feet or so would be the main passage, and thus you might have three rows of trees in front, either in pots or planted out, and root-pruned as necessary. By this mode you could have Peaches and Nectarines against the back wall, and Cherries, Plums, &c., of the best sorts in front. Bear in mind what has frequently been referred to in "Doings of Last Week"—the watering that will be required for trees in pots. The labour in this respect would be lessened if the trees were planted out; but then they are kept small with more difficulty.

The plan involving least labour in such a house would be to plant against the back wall, and to plant also in front, and train to a trellis some 15 inches from the glass, the trellis to be rounded at $5\frac{1}{2}$ feet from the back wall, so that the sun's rays could reach the bottom of the wall. The trellis at the highest should not, therefore, be more than 6 feet from the ground.

By not planting trees against the back wall and having your main path in the centre, you will have beds on either side that will each hold two rows of dwarf plants. In such a case we would advise the back border being raised 19 or 24 inches, as that would secure more sun light to the back bed. For the sake of neatness, however, one side of the pathway at least would need to be held up with bricks or something of that kind. With such a height as we have spoken of, the back border might be 15 inches higher at the back, slope gradually to the front, and thus a sunk path be avoided, and the expense of keeping up the sides. In our lean-to's the ground at back is about 15 inches higher than in front, and the narrow wooden trellis is on the level. Formerly we had a nice gravel path within 2 feet of the back wall; but we could not keep it moist enough, and greatly prefer the narrow wooden path through which we can pour water at pleasure. Did we wish to try pots, as you are resolved to do, in such a fourteen-feet-wide house we would plant out against the back wall and have three rows of trees in pots in front, the back row not nearer than 5 feet from the back wall, nor above 5 or $5\frac{1}{2}$ feet in height. We would only leave from 18 inches to 2 feet for passing along in front, and unless the front were 5 or 6 feet in height, we would not seek a regular pathway there.

We think these remarks will embrace most of your questions. If you do not plant out against the back wall the border will be all the better for being raised there, and you will have ample room at first for four rows of trees. By keeping to the bush form and having the main pathway in the middle, if ever you wish to plant out the best specimens, one row in each bed will be enough, and you could put a pot plunged in any open space so that no room should be lost. In spring, autumn, and winter such a house will be useful for many things besides the fruit trees.—R. F.]

ROYAL HORTICULTURAL SOCIETY.

SEPTEMBER 27TH.

FLORAL COMMITTEE.—At the meeting held this day there was an extensive display of seedling Dahlias, but few were considered worthy of certificates.

Mr. C. J. Perry, Castle Bromwich, had *Ne Plus Ultra*, large, and of fine form, and quite distinct in colour, pink veined with buff yellow. This well deserved the first-class certificate which was awarded to it. Startler, dark maroon, with pale bluish tinge, was also a pretty flower. Mr. Turner, Elough, again exhibited his fine, deep golden yellow seedling *Leah*, which has been noticed in previous reports as being a first-class flower, and on this occasion it fully maintained the character which has been given of it; also, *Rosetta*, rosy crimson, with a magenta tinge, a very bright colour. Mr. Turner likewise sent a collection of the sorts sent out by him, comprising large and fine blooms of Lord Palmerston, Lord Derby, Criterion, Charlotte Dorling, Princess of Prussia, Chairman, Cygnet, Lord Clyde, Leah, and others. For this he received a special certificate, and a similar award was made to him for five boxes of Roses; among the finest blooms were *Senateur Vaisse*, *François Lacharme*, *Pierre Notting*, *Vainqueur de Goliath*, *Olivier Delhomme*, *President*, *Beauty of Waltham*, and *Souvenir de Malmaison*. *Gloire de Dijon*, with which alone one box was filled, was in splendid condition. A plant of *Lilium auratum* bearing two of its immense blooms was also shown by the same exhibitor. A box of Roses in very good condition was likewise contributed by Messrs. Paul & Son.

Mr. Rawlings, Bethnal Green, had a second-class certificate for *Dahlia Purple King*, a large and showy kind, lilac purple with a magenta tinge; Mr. Sladden, Queen Victoria, Mrs. Sladden, Sparkler, Exquisite, and others, which were shown at the meeting of the 13th of September, were again exhibited, but the Committee did not think them worthy of an award.

Mr. Legge, Edmonton, sent Black Doctor, with fine large very dark blooms; also, Excellent, Ellen, Mr. Golding, Dauntless, Glory, and others, most of which had been previously shown, but not thought of sufficient merit. Mr. Knight, Battle, had Albert Edward, large blooms, carnation-striped and flaked on a buff yellow ground; Mr. Burgess, Chelsea, President Davis, reddish buff; and Mr. Hopkins, Brunette, apricot, very deeply laced with dark crimson. The following were shown by other exhibitors, but received no award—viz., Earl Radnor, Mrs. Brunton, Lord Clifden, Boule de Feu, Fanny Sturt, Queen of the Vale, Chrome, and Beauty.

From Mr. Standish, Ascot, came two very fine seedling Gladioli, for both of which first-class certificates were given. They were—Our Little Lucy, bright magenta rose veined with white, and having a purple feather in the throat, very distinct and beautiful; and Miss Mowbray Morris, large flower, flesh, with splashes of rose, and purple feather, a very fine variety. *Skimmia oblata*, also from Mr. Standish, was likewise awarded a first-class certificate. It is very ornamental both in berries and foliage, the former being oblate and bright red, the latter of a uniform light green, and it is stated that it stands sun well.

Mr. Veitch, Chelsea, sent a magnificent basket of *Odonoglossum grande*, the flowers 5½ inches across, the plants in which had been treated on the cool system, never having been afforded fire heat since last winter. For this a well-merited special certificate was given. *Cattleya exoniensis*, one of the hybrids raised in the Exeter nursery by Mr. Dominy, the parents being *Cattleya Mossiae* and *crispa superba*, had a first-class certificate. The flowers are large and showy, the lip being deep purplish crimson, orange veined with purple at the base, and the petals and sepals of a delicate lilac blush. *Odonoglossum Uro-Skinneri*, was also contributed by Mr. Veitch.

Mr. Watson, gardener, to C. Leach, Esq., Clapham Park, had a first-class certificate for *Nerine cornucopia* major, a Cape bulb with fine, compact heads of orange scarlet flowers, the stamens, of the same colour, standing out conspicuously above the divisions of the flower. He likewise exhibited species of *Nerine* and *Brunsvigia* of no remarkable beauty, and a showy *Hæmanthus*, with orange anthers and scarlet filaments.

Mr. Smith, Hornsey Road, received a second-class certificate for *Petunia Fame*, with crimson purple and white flowers, a pretty variety. Mr. Barker, nurseryman, Godalming, had a first-class certificate for *Asplenium resectum*, a very pretty stove Fern from the Island of Ascension. From the same exhibitor came also *Pteris flabellata ascensionis*, *Asplenium erectum proliferum*, in which the fronds are profliferous towards their extremities, *Psilotum triquetrum*, three pretty varieties of *Mimulus*, and twenty-four kinds of *Tropæolum*, among which were several brilliant in colour, and others peculiar in their markings.

Mr. Parsons, Welwyn, contributed *Achimenes Stella*, rich velvety crimson purple, a fine variety, for which a second-class certificate was awarded; Mr. Batley, Rugby, a stand of seedling *Verbenas*; and Mr. Thompson, Ipswich, *Callirrhoe involucreta*, crimson purple, with white base, which was commended as likely to prove a useful border annual. Lastly, from Mr. Bull, came *Dendrobium aduncum*, with small but pretty white flowers, with a faint blush of lilac; *Cattleya bicolor* major, with a rosy purple lip, and olive sepals; *Adiantum prionophyllum*, *Alocasia longiloba zebra*, the leaves metallic green, and the leafstalks with zebra markings; and *Fuchsia The Giant*, with very large double flowers, the corolla blue violet, and the sepals scarlet, but in the specimen seen not reflexing well.

FRUIT COMMITTEE.—F. J. Graham, Esq., in the chair. A scarlet-fleshed Melon of good size weighing about 3 lbs., was received from Mr. John Murdoch, gardener to H. Alsopp, Esq., Hindleyp Hall, Worcester. The flesh was very tender and melting, and the skin thin, and the flavour was remarkably good, so much so, that the Committee awarded the fruit a first-class certificate. Mr. Henderson, of Trent-ham, sent a dish of very handsome Peaches, of the variety known as Gregory's Late. This Mr. Henderson considers the best of all the late Peaches, both as regards flavour and lateness, and his opinion was confirmed by the Committee, who unanimously considered it a variety worthy of

general cultivation. Mr. Myers, of Brentford, also exhibited a fruit of the same variety. Mr. Graham, of Cranford, exhibited fruit of his Muscat Muscadine Grape, which was delicious in flavour, differing entirely from that of Chasselas Musqué, it is more brisk, and has a sort of orange flower flavour mixed with that of the Muscat. This was produced in a house without any fire heat. From the garden at Chiswick there were two varieties of Frontignans, Muscat Regnier, and Chasselas Musqué de Nantes, both very similar, and neither calling for special mention. Mr. John Richardson, gardener to Joseph Pease, Esq., Southend, Darlington, sent splendid bunches of Golden Hamburgh, and Foster's White Seedling, but unfortunately they were so smashed in the box through being badly packed, that their beauty and flavour were destroyed.

MR. WILLIAM PAUL'S NURSERIES, WALTHAM CROSS.

It is now upwards of two years since we paid more than a passing visit to these nurseries, though often intending to go over them in a deliberate manner; but want of time, and the very knowledge that there is something there to interest at all seasons, were the cause of that intention not being carried into effect till the other day. As a walk leads directly from the platform of the Waltham Station to the nurseries we availed ourselves of that mode of access, and passing beside large quarters of fruit trees, Conifers, and ornamental shrubs, and then along a broad grass walk with beds of evergreens on each side, we reached the office, where we were fortunate enough to find Mr. Paul, who kindly offered to show us round. In leaving it we passed through the shop, which, as might be expected in the height of the bulb season, was full of Hyacinths, early Tulips, Crocuses, Narcissus, &c.; and on remarking on the size and weight of the bulbs, Mr. Paul informed us that they were the largest and heaviest which he had ever imported.

Being anxious to again look at the splendid new Greenhouses which Mr. Paul is about to send out, we visited the houses first. Of these several new ones have been erected during the last two years, and one is now being completed. They are all span-roofed, about 50 feet in length, and from 18 to 20 feet in width, and the whole are efficiently heated by means of two boilers, one being a modification of the saddle-form, and the other one of Monro's cannon boilers, with the performance of which Mr. Paul expressed himself perfectly satisfied. These houses, though alike in their general appearance and of the most simple construction, are admirably adapted to the purposes for which they are severally intended, and might be studied with advantage by those who seek to erect glass structures combining efficiency and durability with economy.

The first house we entered was filled with Tea Roses, planted out in beds in the middle and at the sides, and trained up the pillars and over the roof. Notwithstanding the dryness of the season, which has affected plants under glass as well as those out of doors, in consequence of its being impossible to preserve at all times the requisite degree of humidity in the atmosphere, Noisette Lamarque and some other Roses in this house have made extraordinary growths, varying from 5 to 7 feet in length. Gloire de Dijon, planted in the central bed, and grown on its own roots, is trained to a single stem 7½ feet high, the growth of but one year; and as a further example of the rapidity with which this variety grows, Mr. Paul informed us that he knew an instance in which it had in one year gone up 14 feet of the front of a cottage and then run 7 feet along the roof, making a growth of altogether 21 feet. Were it not that almost all the ripe shoots have to be cut for buds, this house would be a magnificent sight, but as it is it contains many glorious blooms, scenting the air with their delicious perfume. Of the numerous varieties planted here, Celine Forestier is the freest and best yellow climber, and the blooms are well set off by the fine mass of green foliage which it produces. That superb variety, Gloire de Dijon, was also in fine condition; indeed, if properly managed it is seldom seen otherwise. These two with Belle de Bordeaux, pink, resembling Gloire de Dijon in habit, are the best three for covering a house. Isabelle Gray and Jane Hardy are also fine climbers, with beau-

tinted deep yellow flowers, but unfortunately they will not expand their blooms unless planted in a dry soil and warm situation; on the other hand, Homer, delicate in colour, tinted bluish with a salmon centre, is at once vigorous and one of the hardiest of the Tea-scented Roses; and Nina, with large and very pure bluish flowers, is a lovely hardy kind for planting out of doors, but not a climber. Of others we observed Ophir, pinkish and copper, a good climber for a house coloured white, against which the lighter Roses do not look well, especially if the foliage is not vigorous and plentiful; America, creamy white, large and fine, excellent for a south wall in a warm situation; Niphotos, lemon white, large and very beautiful; Eugène Desgaches, rose, very large and sweet; Duc de Magenta, salmon, large, and cupped; Nimda, rose and yellow, exceedingly sweet, and a profuse and continuous bloomer; Marquise de Foucault, fawn, salmon at the centre, delightfully fragrant; Solfaterre; and Julie Mansais, lemon white. Another house, distinguished as No. 5, was likewise filled with a fine collection of Tea Roses in pots.

In the next house we entered was a collection of fine healthy Vines for fruiting and planting out, amounting to sixty or seventy sorts, and with the wood rapidly becoming well ripened. Passing from this we came to a second vinery, into which Mr. Paul introduced forty-one varieties, both new and old, in order to ascertain the comparative length of time required for ripening. They were all grown in pots, and subjected to cool greenhouse treatment; and many of them were bearing fine bunches, though some of the finest which were exhibited at the Crystal Palace Show had suffered considerably in consequence. Among them were Calabrian Raisin, a good late white Grape, which answers well for pot culture; and Muscat Noir de Jura, an excellent late black kind, which possesses the additional recommendation of being ornamental by its foliage, which changes in autumn to yellow and red. Chaptal, bearing eight fine bunches, fully justified its character for productiveness, and as being well adapted for pot culture; Foster's White Seedling was likewise bearing good bunches, as well as Chasselas de Falloux, the berries of which when ripe have a reddish tinge. This is a variety of acknowledged merit for pot culture, being remarkably productive. Black Monukka, though by no means first-rate, was producing good bunches and has the property of being stoneless. Some very large bunches of this kind were produced in the conservatory at Chiswick two years ago. Of new Grapes General de la Marmora, white, was bearing large bunches and abundantly; Chasselas Bulberry was very thin-skinned and transparent; and so, too, was Almeria. The others were Chavoush, Ingram's Prolific Muscat, and Perle Impériale, a fine-looking berry of a pale amber colour. Chasselas Vibert, though better known, deserves mention on account of its abundant bearing, large berries, and suitability for pot culture.

The next house was filled with a stock of Vines ready for fruiting in pots; and we observed that the wood was short-jointed, hard, and solid, with large well-developed eyes, such as give the promise of starting vigorously.

We now came to a house in which were many of the best of Beaton's Geraniums, and though the requirements of propagation to meet the great demand which will unquestionably arise for these had made great havoc among the shoots, there was still enough to show what valuable acquisitions they are. Amy Hogg is decidedly the finest, being entirely new in colour—a bright purplish rose; producing enormous trusses, and having the habit of Cybister, it will doubtless be planted by the thousand when known, and no one can fail to admire it. Indian Yellow, scarlet suffused with yellow, is another first-rate kind, which cannot fail to become a general favourite. Scarlet Gem, with large orange scarlet flowers and dark horseshoe leaf, will be very useful on account of its colour and dwarf almost creeping habit. Black Dwarf, crimson scarlet, is also of dwarf habit; and the trusses, which are freely produced, are very compact. Glowworm we did not see in flower, but from what we have seen of it on former occasions we can affirm it to be a sort of great promise; the colour of the top petals is a brilliant scarlet, that of the lower ones carmine with a magenta tinge. Orange Nosegay, bright orange, and Donald Beaton, orange scarlet, are both very desirable free-growing kinds; and Mrs. Wm. Paul, with broad finely formed petals of a

delicate peach, if sufficiently free-flowering, will be a great acquisition.

The above are only a few of the best of Mr. Beaton's seedlings, for these amount altogether to about 4000, many of them presenting new shades of scarlet tinged either with orange or magenta; but Mr. Paul is thinning them out as they come in flower, and discarding the least promising and distinct. It is not, perhaps, of much utility to attempt describing plants before they are named, but we may mention a variety with broad silvery edges and pink flowers; another with leaves of a similar character, but not so broadly edged with white, and having magenta flowers; a salmon red, shaded with orange towards the eye; an intense scarlet with broader petals than Stella; and a magenta with a very distinct orange blotch at the base of the top petals, but the flowers as seen were rather small.

Passing by another house filled with Vines, we reached an orchard-house, in which were Peaches, Nectarines, and Apricots planted out, Figs in pots, &c.; but the crop had been gathered except from Late Admirable Peach, which was bearing good-sized fruit in abundance, and Stanwick Nectarine, which appears to succeed much better in orchard-houses than out of doors; the tendency of the fruit to crack is, however, a great drawback to this otherwise excellent variety.

This house is not heated at any period of the year, and except in being provided with wooden shutters sliding in grooves at the sides, it does not differ in its construction from the other structures. The object of having wooden shutters instead of glass at the sides is to economise heat, which in severe weather would be rapidly carried off from the glass; and by shutting up early with sun heat the thermometer is never less than 5° higher in the morning than it is out of doors, and the blossom is never injured by the spring frosts, which render the crops from unprotected trees so uncertain. The soil used is strong turfy loam and nothing else; and to prevent the trees becoming over-vigorous, as well as to promote fruitfulness, they are taken up every second year in autumn, and the crop of the following season is never diminished but rather increased by the removal.

Adjoining the orchard-house a new span-roof is in course of erection for pot Roses. The dimensions are nearly the same as in the case of the other structures, but both roof and sides are to be fixed. Ample ventilation, however, is provided at top by hinged sashes of the same length as the rafter, and which open upwards; whilst air is admitted at the sides by openings in the wall, closed by wooden shutters placed in the interval between every pair of top ventilators, so as to prevent strong draughts.

Several propagating-pits were filled with Vines, Roses, new Geraniums of all kinds, and multitudes of Conifers, such as Thuja aurea, Pinus Lambertiana, Picea Nordmanniana and nobilis, Juniperus chinensis, &c., the number of Conifers raised each season being altogether about 20,000. In one pit were 3000 dwarf Roses, and in another a fine lot of seedling Picea nobilis and several Japanese plants, as Retinosporas, Sciadopitys, Thujopsis dolabrata, &c. One of these, Raphiolepis ovata, now in flower, will, if sufficiently hardy for our climate, prove a great acquisition, the foliage being of the deepest green and of thick leathery substance. As an edging plant, Euonymus radicans variegata promises to be very useful, having the leaves variegated with pure white, and being, moreover, perfectly hardy; and another of the same genus, E. japonicus aureo-variegatus, with dark green leaves and golden variegation, makes a beautiful table plant. It has been shown several times during the last two seasons, and wherever seen has been favourably noticed. A still more valuable acquisition is the new Japanese Osmanthus ilicifolius, which closely resembles the Holly in appearance, forming an admirable substitute for it, and, as far as observations have hitherto gone, of more rapid growth under ordinary treatment. There is besides a variegated form, which may be used to replace the variegated Holly.

We noticed in some of the propagating-pits an excellent and extremely simple contrivance substituted for hinges to the propagating-frames inside the pits. It merely consists of an iron strap attached to the woodwork of the back of the sash, bent so as to hook over a slightly curved piece of iron fixed edgewise on the frame, thus—

This never goes out of order, and the sash can be lifted off whenever it may be necessary to do so.

Passing by other pits where there were thousands of seedling Hollyhocks and dwarf Roses, and merely glancing at two tiffany-houses, which are invaluable for shade and coolness in summer, we came to the nursery quarters, where we had intended to make a lengthened stay, but from want of time were compelled to content ourselves with little more than a run through. This was the more to be regretted, as Mr. Paul has bestowed much attention on trees and shrubs and their adaptation to particular soils and positions so as to produce effect in planting. Among Yews were a lot of well-grown and compact plants of the Golden, and a kind intermediate between the Irish and the common, with a fine pyramidal form and very dark almost black foliage. There were, besides, interesting collections of English Hollies, Ivies, and quantities of choice Conifers—as *Thuja gigantea*, plicata, and Lobbi, *Thujaopsis*, *Wellingtonias*, *Cupressus Lawsoniana*, *Piceas Nordmanniana*, *nobilis*, and *pinsapo*, various Cedars, &c.; in addition to quarters of Roses, altogether five or six acres in extent, containing multitudes of standard Roses, where *Gloire de Dijon* and *Mrs. Bosanquet* were blooming finely, while *Dr. Lindley* was remarkable for its extraordinary vigour and the size of the leaves, many of them 3½ inches in length. The last-named, although not actually in bloom, was covered with flower-buds. A bed of the variegated *Rhododendron ponticum* was very conspicuous by its well-marked yellow variegated foliage; and the variegated *Acer negundo* was another invaluable plant for lighting up shrubberies and relieving the monotony of green which is so often complained of.

In the fruit-tree quarters, besides an extensive general stock, were large quantities of pyramid Pear trees of the best varieties, and what was alone worth a journey to Waltham to see, dwarf Apple trees on the Paradise stock, which though not more than 2 feet in height were bearing a most extraordinary crop, the fruits in many instances touching each other on the bearing-shoots. Several of these dwarfs had as many as thirty-seven Apples on them, not small but good medium-sized fruit, and where the variety was naturally large the fruit were so likewise, though not so numerous. These dwarf bush Apple trees were only 2½ years from the graft, and were planted in rows 2½ feet apart, and at not more than 18 inches from each other in the row. Assuming, however, that each tree were allowed 5 square feet of ground, an acre would hold 8712 bush Apple trees, and if these only bore fifteen fruit a-piece, the produce would be 130,680 fruit, or say 725 bushels, the value of which on the ground would be upwards of £100. Where bulk of produce for sale is the object, it may not be desirable to confine the trees to the same dimensions and space allowed them in the nursery-rows, but from what has been stated it is evident that a very large produce can be obtained from a small area, and that in all probability such trees would prove remunerative if planted on an extensive scale, whilst for small gardens they must be invaluable. There are many persons who could have at most but half a dozen standard trees, and many more who have only room for one, and tastes differ, varieties do not all ripen at the same season, most fruits that are good for the dessert are not fit for the kitchen; but by planting these dwarfs a long succession and diversity of flavour and appearance can be secured.

There is then something to be seen, something to be learnt, at Waltham Cross at this season as at others.

AMERICAN GRAPE-GROWERS.

A NEW beginner in Grape-growing must "keep cool;" as in all divisions of the sons of men the newest converts are the most unreasonable zealots,—he will find among Grape-growers those who give him the most trouble are they who have had the least experience. In one of our last year's volumes, our correspondent "Phineas Chewce"—vinous juice, we presume, changed to vinegar—happily hits off this peculiarity of the neophyte, by supposing him to recommend not only planting a cat at the roots of the Grapes he would have muskcat, but it must also be planted with its "tail to the north pole." The house must be of such a shape, such a size, such an angle, and such an aspect. None other will do at all. The plants must be set so, trained so, pinched so,

and pruned so; and so and so must be the hourly attention, daily practice, and yearly rule. The crop of your cold vinery will give you the "cold shoulder," unless you heat it; and it will put on airs, unless you air it every day. So the story goes.

"The first thing hi does when hi goes hinto my vinery hof ha hevening," once said a good gardener to us, "hi pulls hof my hair." But "I should pull off my hair if I did," replies an equally good one; "I lower my sash, or open my ventilators in April, and let the air stay on all the year."

It is the fault of novices that they cannot distinguish between essentials and non-essentials. All these minute matters are well enough if you want superior Grapes; but good Grapes and plenty of them can be had easily and cheaply; and no matter how small a garden lot may be, one of the first improvements, after laying out the garden proper, we should recommend to be a cold graperie.—(*American Gardener's Monthly*.)

CULTIVATION OF THE MELON.

(Continued from page 194.)

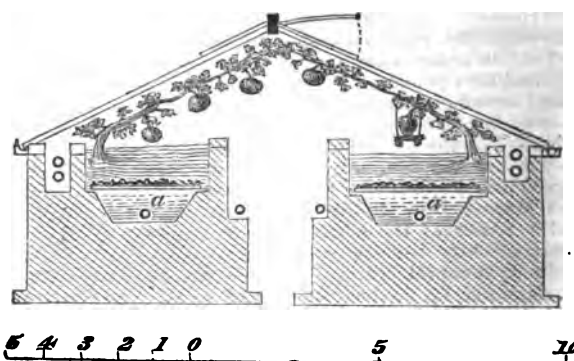


Fig. 12.

Fig. 12 is a span-roofed house, with a path in the centre and two beds on each side. The house is heated by six four-inch hot-water pipes, two just by the side walls within the house all round, and one on both sides of the path. Bottom heat is communicated by two hot-water pipes, one under each of the beds, in the first instance to a tank, a, a. The tanks are covered with slates, and on them a foot of compost is placed for the roots to run in. The plants are trained to a trellis. The ends of the house should be respectively north and south. A house of this description is admirably adapted for producing early Melons and Cucumbers.

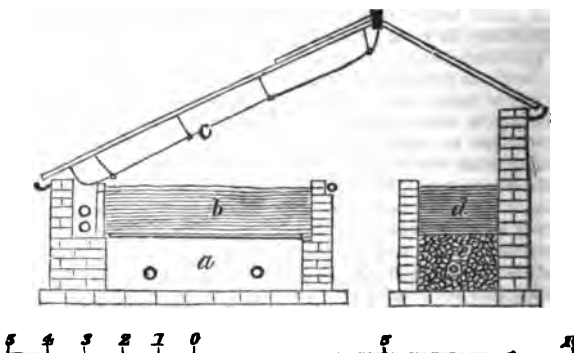


Fig. 13.

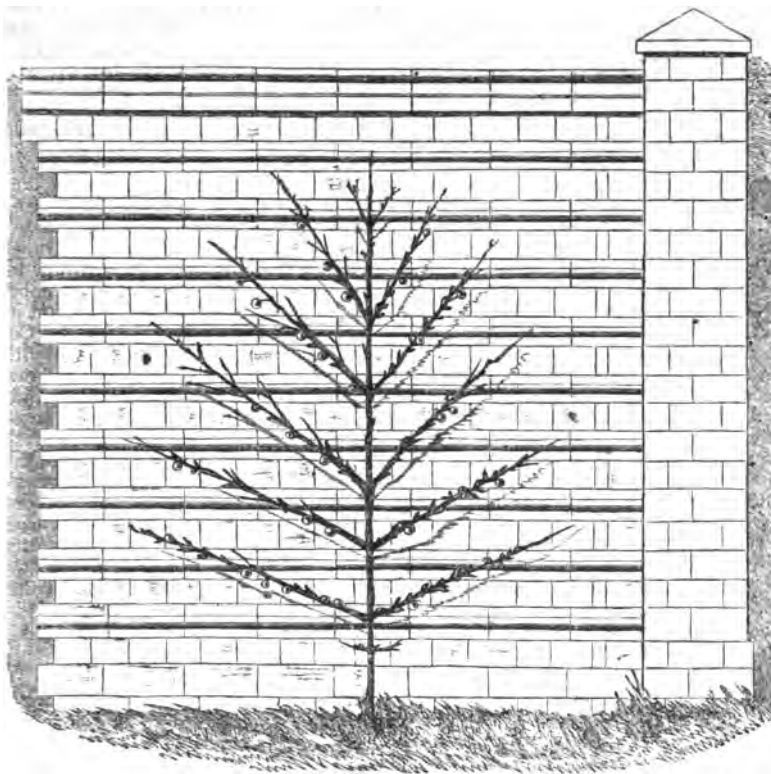
Fig. 13. This is simply a house with a half-span-roof. Bottom heat is supplied by two four-inch hot-water pipes to a chamber, a, and top heat by two pipes in front, and one to the left of the path in the centre of the house. b, is a bed of soil. There is a trellis at c, and a bed at back, d, which is very useful for plants, yet of no value for Melons. Bottom heat is furnished to it by a hot-water pipe, c, covered with rubble.—G. ARBY.

(To be continued.)

FOXLEY'S PATENT CORRUGATED BRICKS FOR GARDEN WALLS.

On the centre of the face of each brick is a stout bead projecting half an inch from its surface; this being pierced with holes at intervals of about 2 inches, serves by means of bast, string, or wire, to tie in the branches of trees.

Every gardener knows that walls against which fruit trees have been trained for a long series of years become much defaced by nail holes, and that repointing becomes necessary, not only to allow of fresh nails being driven in, but to prevent insects lurking in the crevices; but walls erected with these bricks have an ornamental appearance, and never get defaced with nail holes; the trees may be kept perfectly clean and free from insects; no nailing is required, and there is, consequently,



no danger of bruising the branches; and no extra fittings of iron, copper, or wood trellis are needed.

The bricks are made of the ordinary size, and, therefore, can be used in connection with common bricks. They are made either with a horizontal or vertical rib, but the horizontal is considered the best for general use. One thousand corrugated bricks are required to 3500 common bricks.

The smaller engraving below represents a single brick, showing the mode in which the projecting rib is perforated. The three holes at the end of the brick are only to make

the bricks lighter, burn sounder, and give a firmer hold of the mortar. We shall be glad to hear of their being tried on a large scale.

NOTES ON FLOWER GARDENING IN 1864.

WHAT changes are yearly taking place in our flower gardens! For example, glance over a few of the many plants which have been brought forward within the last eight or ten years as flower garden plants. Along with many others I am gradually using fewer Verbenas, and only six or eight years ago we used them to more than double the extent we now do. I have repeatedly stated most of the objections to the Verbena being extensively used. First, the rambling habit which many Verbenas have prevents their being used in ribbons, or even very often in beds, with only a margin of some other colour; secondly, there is their liability to mildew in dull or rainy weather, and while such weather lasts their often refusing to flower satisfactorily; and, thirdly, two or three of our most choice sorts have this season been much affected with rust. This may, perhaps, have arisen as much from the very dry and hot atmosphere overhead as from dryness at the root. We managed to keep their roots in a tolerable state as regards moisture by watering, at least giving sufficient for them to have grown much better, and no doubt they would have done so, had not the atmosphere been always so very hot and dry. The rust almost killed several sorts of our Verbenas before the rain came.

As respects this rust upon some of our Verbenas, I cannot satisfy myself, but very probably they had been to a certain extent attacked by some sort of fly, which by puncturing the leaves had rendered them less able to battle against the hot weather.

I am pleased to say that my former favourite has again come off victorious. Purple King has stood under all conditions the best; all through the hot weather it was in

splendid bloom. Blue Bonnet, Array, Mrs. Holford, Robinson's Defiance, Géant des Batailles, Miss Hamilton Nisbet, and one or two other "selfs" we may still retain. However, none but selfs of good, distinct colours prove telling and effective. We have in one or two parts of our grounds to do battle against large Oak trees, and this year they have done so much injury that I shall keep as much as possible away from them in all future arrangements.

I am glad to say my favourites for the flower garden, the Geraniums, required less attention than almost anything else; and except in two places, where they were directly under the shade of an Oak tree, they have all grown and done well. Some sorts have yielded an immense quantity of bloom. Tom Thumb outdid itself with me this year in the amount of bloom which it produced. Stella Nosegay has commanded universal admiration from all who feel an interest in the flower garden. Brilliant has been indeed brilliant, especially during the hot weather; Baron Hugel was quite a mass of bloom; Christine has done well, and I might go very nearly over the names of all we have, and give a good report of all.

We grow about half a dozen sorts of Calceolarias, all good when used for the purposes for which they are best adapted. Some are good for ribbons when planted in the second row from the back; others to form the second row from the front. Next to the front row I use Aurea floribunda, and one that is not of quite so deep a yellow, but rather more dwarf, having the foliage not quite so stiff and erect, nor so much serrated. I am not able to give you its name, it is a very good dwarf. We use as a tall-growing one in certain cases, Polyphemus, and as a yellow, Latifolia. Prince of

Orange has bloomed very abundantly, and when planted beside Flower of the Day Geranium, or any other light-foliaged kind, it tells well.

Some years ago I thought of dispensing with Petunias altogether in the flower gardens. However, these few seasons past I have made more use of them, and in some cases they tell well, and flower all the season. This is of itself a very great advantage. We have a bed of Scarlet Nosegay Geranium, encircled by a ring 18 inches wide of a small flowered Petunia. The Petunia is kept pretty close down by the use of long hooked sticks. On the outside, next the grass, is a row of Sedum carneum variegatum, which produces a good effect. We use a small white Petunia in our panel border, white being a colour we are somewhat deficient in. We keep the white in this panel border pegged down in the same way as I have just stated. We plant it in squares of 10 or 12 feet, all the squares being divided by a band of yellow Calceolaria, and each square is made as much different from the others as the means will allow. A bed or square of white Petunias tells well planted between a panel of Tom Thumb and another of Scarlet Nosegay.

Has any one observed the singular inclination which the little Sedum carneum variegatum has, at least here in the Isle of Wight, to grow in its recumbent form more or less towards the sun? We have it in three positions, all differing, and in all it exhibits the same tendency, that of growing towards the sun. I have observed that since the rainy and dull period has come, this propensity is not manifested so strongly as it was in the very hot weather. I would be glad to learn if any one else has observed the same tendency exhibited by this plant.

It is not a large variety of plants which we should aim at in our flower gardens, it is not botanical collections that please the eye in modern flower gardening, but a few well chosen yet distinct colours, well contrasted, and each bringing the other colour boldly out.—G. DAWSON.

CUTTING DOWN OLD PEACH TREES.

THE Rev. Mr. Radclyffe in a recent communication to this Journal says he has given his Peach trees their autumn management. I have lately had some old Peach trees put under my care, and as I am anxious to do my best with them, I should be much obliged if Mr. Radclyffe would tell me how he manages his trees. I read an account of his mode of management some time back, but I had then no old Peach trees, and as I send THE JOURNAL OF HORTICULTURE away after I have read it, I cannot refer to it.—S. C.

[Some years ago I cut the trees down as near to the stump as my gardener (now dead), thought prudent, probably on an average to from 2 to 3 feet from the stumps. Were I now to cut such trees down, I would cut them closer to the stump. The perpendicular roots were all cut off, and the surface roots were cut off in a radius of 80 inches round the stumps. The ground round the stumps was then renewed with black dung and fresh mould. Since the period of cutting down I have renewed the whole of the surface soil. As the crop this year on the three trees was heavy (560 Peaches), I dressed the stumps and surface soil three times with the residue of beer-barrels, mixed with three or four times the quantity of water. After this was put on I copiously watered the whole of the ground so dressed.

As regards the autumnal after-management referred to by "S. C.," on the removal of the hexagon netting, I cut off all the second growth of wood close to or within an inch of the wood previously pinched. The average length of the wood pinched would be from 6 to 8 inches. The forewood is spurred. I disbud but very little, as I am persuaded that depriving the tree of foliage is not good for it; and that in the case of the base and centre of the trees, it leads to bareness. The wood is ripening well, and there will be plenty left after any winter demolitions that may take place.—W. F. RADCLYFFE.]

THE ANT TRAP.—Procure a large sponge, wash it well and press it dry, which will leave the cells quite open; then sprinkle over it some fine white sugar, and place it near where the ants are troublesome. They will soon collect

upon the sponge and take up their abode in the cells. It is only necessary to dip the sponge in scalding water, which will wash them out dead by tens of thousands. Put on more sugar, and set the trap for a new haul. This process will soon clear the house of every ant.

ARABIS LUCIDA VARIEGATA, OR GOLDEN ARABIS.

I THINK it was in reply to some inquiries of Mr. Robson that I made some remarks last autumn about this lovely hardy edging plant. Another year's experience of it on a much larger scale has fully confirmed my conviction that, since the introduction of Cerastium tomentosum as a white or grey edging plant, there has not been so really lovely and easily managed an edging plant added to our parterres as this Golden Arabis. What the Cerastium is as a white or grey edging, this Arabis will ultimately become as a golden. It is one of the most unique imaginable where a straight front boundary line is required. An idea of its fitness and beauty when closely planted in long lines cannot be formed from seeing a few individual plants. Here it has been the object of admiration to all who have seen it. I need scarcely say that it is as hardy as a daisy, and easily increased by division either in spring or autumn. It requires very little labour to keep it tidy, as all that is needed in this respect is to pick the flowers off immediately they show themselves in spring. It is never so fine when planted in sandy or hungry soil as when well cultivated.—D. THOMSON, Archerfield Gardens.

WORK FOR THE WEEK.

KITCHEN GARDEN.

CONTINUE to destroy weeds wherever they appear. Clear away the yellow leaves from Broccoli and Brussels Sprouts, and any decaying vegetable matter wherever met with. To prevent the attacks of slugs on young Lettuces or Cauliflower plants mix soot and lime in equal proportions, and dust the plants with the mixture once or twice a week. Cabbages, make good the blanks that may have occurred in the plantations of Cabbages or Coleworts, and keep a large reserve to make plantations in spring, as well as to fill up the blanks caused by the winter. We must expect frost soon, and ought to prepare accordingly. Lettuces, for instance, that are just coming into use may be lifted with balls, and placed in frames. Onions, look over those that have been stored, and remove any that are beginning to decay. Radishes, make the last out-door sowing, which, if the winter do not set in early, may prove useful. Spinach, see that it is thoroughly thinned and well hoed in favourable weather, and in every way encouraged. Tomatoes, in late situations where they are just ripening, let them be gathered and ripened off in the houses, as the least frost is fatal to them.

FRUIT GARDEN.

The principal operations in this department are gathering fruit when it is in proper condition, making preparations for filling up blank spaces on the walls, trenching ground for orchard trees and fruit plantations, which should be well done to insure success. Planting may now be done; mulch and stake safely without delay. Continue to keep the runners removed from the Strawberries, and those that have been some time potted for forcing should now be placed in a sheltered situation to insure their not being too much soddened with wet. Strong pricked-out plants may still be potted with good success, if placed on a kindly bottom heat. Keep the fruit-room cool and airy, examine the fruit frequently, and pick out any that are found to be decaying.

FLOWER GARDEN.

October is the most eligible time of the whole year for alterations, planting, &c., and whether planting or general ground work, operations should be carried forward with vigour as soon as possible. Such matters should not be allowed to press on the ordinary business of the garden, extra work requires extra labour, and if such is not supplied a corresponding amount of injury must occur in some other department. Alterations carried out during the autumn are doubly important, both on account of the season for

planting, turving, and such operations, and also on account of the busy character of the spring months, which always bring sufficient claims on the most diligent, without the presence of extras of any kind. Remodelling flower-beds, or making new ones, may be carried on after the middle of the month, and where old beds are to be broken up the herbaceous plants already existing should be numbered or named in due time, in order to be able to ascertain the heights, colours, &c. Ornamental shrubs, whether evergreen or deciduous, may be removed with every prospect of success after the second week; no hesitation need take place as to the kinds, provided the ground is properly prepared by trenching, and thoroughly drained if necessary. The broom will now be in constant request, and although the varying tints of autumn are so admirable when contrasted on the trees, yet they are not so much admired on the lawn or gravel walks. We would now suggest a most liberal use of the roller on all lawns previous to the last mowing, this will leave the surface firm and smooth for the winter.

GREENHOUSE AND CONSERVATORY.

In arranging the stock in its winter quarters in these structures beware of overcrowding it. Drawn stock is not endured in these days, it is far better to throw a portion away than to spoil superior specimens. Many of second-rate character which require another season's growth, may be preserved in good dry pits, at least until the middle of December, when if very hard weather occur they may have a chance of removal, perhaps to some of the other structures until the end of January. It ought ever to be a maxim in regular plant-houses that no two plants touch, still we must confess that many who would admit the propriety of the principle are frequently compelled to ignore it in practice through want of sufficient accommodation. See that Epacris and other winter-blooming plants are placed in a part of the house where they will be fully exposed to the sun, so that the wood may be well ripened and free blooming insured. Examine frequently Heaths and other plants subject to mildew, and apply sulphur as soon as it is perceived. Water to be very carefully given at this season, especially in the case of large specimens, for there is much more danger of over-watering now than when the weather is warmer and the plants more active; therefore, look over the plants frequently and never water until it is absolutely necessary. Any of the late-growing Heaths which may be in want of more pot room may still be shifted, but do not expose them to cold winds, and water very carefully afterwards, for the roots cannot be expected to progress very rapidly at this season. Let everything requiring it be neatly tied at once.

STOVE.

Forcing must be avoided as much as possible, still the cold nights must not be permitted to affect the temperature so as to check materially the declining growth. Fall into winter treatment as quietly and naturally as you can; to accomplish this without sensibly affecting the healthy appearance of your plants is a great desideratum, and with care quite within the reach of the anxious cultivator.

FORCING-PIT.

This important and indispensable erection now begins to claim our attention. It may be termed the workshop of decorative horticulture, for it is out of this department that ornament and perfume must be obtained. Greenhouses and conservatories always afford some flowering specimens even in the midst of winter; but aided by this auxiliary they may be stocked at all times during the winter and spring months with suitable subjects in bloom. Take in an ample supply of all kinds of shrubs fit for this purpose. This will apply more particularly to American plants. All kinds of Dutch bulbs must also be immediately potted and plunged in a convenient situation ready to be removed, when wanted, to the forcing-pit.

PITS AND FRAMES.

Early-struck cuttings to be removed to shelves in the greenhouse or pits. If cuttings are now taken from *Chrysanthemums* showing bloom, put three in a 48-sized pot, and placed in a nice heat, they will soon root and bloom beautifully for decorating the front of stages or clumps.—
W. KNAKE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

The dry weather having caused Spinach to come up rather late, instead of sowing again we planted a number of rows, taking up patches of from three to five young plants, and putting them in rows some 6 or 7 inches apart. These, supplied with a little clean water, are now doing well. In our stiff soil we do not make a practice of thinning Spinach much, but rather cut out the young plants for use, and leave it on the whole rather thick for winter. We find that we have a better supply from not thinning it much in the rows. In rich, light land we think it would be as well to thin the August sowing in September, to about 4 or 6 inches apart. What is the best way to cook Spinach? The only time we tasted it truly delicious, it was thus managed. The heads and leaves were washed well, and allowed to drop all the water possible from them in an open sieve, then turned into a saucepan and boiled or rather steamed with their own juice. The chief of the *cuisine* told us that boiling in water spoiled it. Certainly as we tasted it it was delicious.

Cabbages.—Planted a piece with our forward plants that had previously been pricked out, lifting them with small balls, and setting them in soil which had been well exposed to the air after the Onions were taken off, in rows 2 feet apart, and 1 foot from plant to plant in the row. This width is necessary if the crop is to stand over the second autumn and winter. A clergyman who is a good gardener told us the other day that he made it a point at one time to pull up a spring Cabbage as soon as he had cut from it, but that now he sees the propriety of leaving the stumps to produce more. From many of our plants, besides the fine one Cabbage in early spring or rather summer, we have had three or four nice Cabbages in summer and autumn, and now these plants have each heads consisting of from five to a dozen nice young Coleworts. If thus left, 2 feet from row to row is not too much. Did we merely take the first Cabbage, 1 foot from row to row would be enough, and a vast amount of cutting would be obtained in little room. What we said lately on leaving all the old leaves and prunings of heads, &c., between the rows, will be found appropriate. In addition to rough hoeing, we would manure-water the whole of the old piece if we could. It is generally a rare fillbasket until the spring, if the winter is not very severe. If thus treated with a little enriching in autumn, they boil as sweet as young Coleworts; but it is well to encourage both. *Coleworts*, now heading, were planted about 12 inches apart, and have had in this bright weather a little sewage water.

Onions.—Sowed a few lines for succession to those sown in August. If the weather in winter should prove open, these will be best for spring transplanting, as the earlier-sown would be too forward. We prefer transplanting for early bulbs to allowing the plants to remain where sown. In stiff heavy land, if the plants remain where the seeds were sown in autumn, the earth should be scraped away from the surface of the bulbs, as otherwise they are apt to come long-necked. Tied up a lot of summer Onions in strings of different sizes, so that larger or smaller ones may be had at once as wanted. The White Spanish and the Tripoli we like best for autumn sowing. It is only by autumn sowing and transplanting that we can hope to rival the foreign imported Onions. This season the Onions are firm and sound, and fair as to size, but not so large as usual on account of the drought. This second summer after the rains is making all look bright and promising again.

Cauliflowers.—Pricked out more as previously stated, and watered those bearing, and successional crops, with sewage water. A nice crisp Cauliflower is what we find people never tire of unless presented in too great quantity.

Mushrooms.—Spawned the first piece in a shallow bed in the Mushroom-house, and just surfaced it with a little fresh droppings. We will allow it to remain a few days before earthing-up. Our beds in the open shady shed are covered, so that we have no need to hunt the pastures, and the home-grown are far more juicy and fleshy than those in the open fields. Before we took to the open shady shed in summer we used to be troubled with thin maggots. Mushrooms in houses in July and August, but we have now

no difficulty in producing them as sound and firm as at Christmas.

It is much to be desired that our friends would respond to the wish of the Editors by trying the experiments recorded at page 257, as we fear we cannot afford the time ourselves; and if we did the result would be of little use to us, as we have already detailed how by rich surfacings of Mushroom-beds we obtained the Mushrooms too thick and massive for successful cooking. If we were sure that such heavy Mushrooms would be desirable, then we might strive to obtain them; but at the weight spoken of we do not see how they could be cooked without slicing them into a number of pieces. From our knowledge of the antipathy felt by the Mushroom for lime when at all active, and other reasons, we must confess ourselves a little sceptical of the whole affair; but still we would be glad if others with more leisure would carefully conduct the experiments. The farmer's son was no fool who, after attending a course of chemical lectures, said he found out that muck made Barley grow, though he had a strong suspicion of this truth before he was indoctrinated with scientific farming. We have hitherto relied for Mushroom crops on muck in a certain condition; but if by a cleaner chemical process we can obtain them healthy and suitable for the table, why, by all means let us have them.

Capsicums, Tomatoes, Cucumbers, &c., as in previous weeks.

COTTAGE GARDENS.

We are glad that able men are doing what we attempted to do many years ago—namely, showing the connection between a well-managed garden and a clean, well-managed, comfortable house. There will, no doubt, be exceptions; but the flowers in the window, and plants and vegetables in the garden, give us a sort of key to the character of the inmates of the cottage. On this account, whatever value we might put on allotments at a distance, we would never place them in comparison as to advantage with a garden close to the homestead, where even a few spare minutes might be profitably spent.

There are just two ideas here which we wish to ventilate. The first is in connection with the subject of well-kept cottages. Marks of approval in different ways are often bestowed on the best-kept cottage gardens. As a general rule, we think the conclusions are formed at too early a period, if only one visit is paid to the gardens. It would be better if these were inspected late as well as early in the season, or, perhaps, at three seasons in the year—say April, July, and October. We are all, unless very lazy and unthrifty, aroused by the beauties of spring, and we dig, and plant, and sow, and clean, and brush, as if we would be insulting all that is beautiful and harmonious around us, if we allowed anything like untidiness and filth to appear. We are apt, however, to treat our gardens much as many people treat their houses—give them one good clean-up in the year, and then just a brush and a promise at times. As we obtain the produce we think less of neatness, and thus it often happens, as any person may notice in passing along the highway, that the garden that is a little paradise in May and June, is too much the garden of the sluggard in October and November, overrun as it is with decayed vegetables polluting the air, and weeds of all sizes left alone in their glory. After the winter vegetable are put in and cared for, every decaying bit of vegetable ought to be covered in the manure heap, and every spare bit of ground turned up to the ameliorating influences of the atmosphere. Some of the marks of commendation for cottage gardens should be retained for their found condition at this latter time, and the position of the refuse heap, the slop-hole, and how managed, should be taken into consideration, as well as how these matters would bear on the health and comfort of the inmates of the cottage. Cottage gardens in general in the autumn are much behind the mark, and as such exert a deteriorating moral and social influence.

The other idea is just this—many possessors of cottage gardens have complained to us that their efforts at neatness, nicety, &c., were undervalued, because they had wrought or did work in a garden. They have complained that they were disqualified from taking commendations or prizes on account of their daily work, and that prizes were taken by tailors, shoemakers, and artisans, who had more time in their gar-

dens than they had. Where there are many of such garden labourers in a village or neighbourhood, it might be advisable to let the competition be among themselves. Where this is not the case, or no rule to the contrary exists, we do not think that working in a garden ought to be any cause for disqualifying them from contending for the place of honour. True, they may be more conversant with the routine work, and know more about the best kinds of vegetables, and thus far have an advantage over their fellows who follow other avocations; but they labour under a great disadvantage in the very sameness of their usual day work for their employers, and the evening work for themselves. To the tailor and the shoemaker, and many other artisans, working in the garden is a delightful change. The work, in fact, becomes rest in labour. The tramping, and the digging, and the wheeling give a zest and preparation for the usual toil. Apart from the advantage and the pleasure to be gained, there can be no great rest in digging for oneself on an evening after digging for an employer all day. This depressing influence should be kept in mind, as well as the advantages such labourers possess; and duly allowed for, there will be little difference between them and other labourers and artisans. The feeling of satiety from long continuance at one kind of work is perfectly natural. The recognition of it has led to the proverbs about the smith's mare and the shoemaker's wife being ill shod. It explains the reason why, generally, with many exceptions it is true, farmers are such careless gardeners. They are occupied with their farming pursuits during the day, and gardening is such a near neighbour to farming, that the former furnishes no zest in the way of a change. You will have no difficulty in finding among farmers men of scientific knowledge, good chemists, and attentive students of natural history, whose gardens would not compare with those of some of their labourers. The truth is, when they have a little time they like a pursuit that takes them farther away from their daily avocations.

Among fruit and flowers our work was chiefly a continuance of what was reported in previous weeks. The flower garden, but for the falling leaves, still looks fair—R. F.

COVENT GARDEN MARKET.—OCTOBER 1.

Supplies continue good; fruit is very plentiful; vegetables of most kinds abundant. Some foreign Hamburg Grapes of middling quality have arrived. Melons are becoming more scarce; Pines are sufficient for the demand; Oranges are more plentiful in consequence of the arrivals of autumn fruit from Madeira; and as heavy importations may be expected shortly, prices have fallen. As regards Apples and Pears we have nothing fresh to report.

FRUIT.

	s.	d.	a.	d.		s.	d.	a.	d.
Apples ½ sieve	1	0	2	0	Mulberries punnet	0	0	0	0
Apricots doz.	0	0	0	0	Nectarines doz.	0	0	0	0
Cherries lb.	0	0	0	0	Oranges 100	14	0	0	0
Currants, Red, ½ sieve	0	0	0	0	Peaches doz.	3	6	12	0
Black doz.	0	0	0	0	Pears (kitchen) bush.	5	0	10	0
Figs doz.	1	6	2	6	dessert doz.	1	0	3	0
Filberts & Nuts 100 lbs.	60	0	80	0	Pine Apples lb.	4	0	8	0
Gooseberries ½ sieve	0	0	0	0	Plums ½ sieve	2	0	7	0
Grapes, Hamburgs lb.	1	6	4	0	Quinces doz.	4	0	6	0
Muscats 3	0	7	0	0	Raspberries lb.	0	0	0	0
Lemons 100	8	0	14	0	Strawberries punnet	0	0	0	0
Melons each	1	6	4	0	Walnuts bush.	14	0	20	0

VEGETABLES.

	s.	d.	a.	d.		s.	d.	a.	d.
Artichokes each	0	4	0	6	Horseradish ... bundle	2	6	0	5
Asparagus bundle	0	0	0	0	Leeks bunch	0	2	0	2
Beans Broad ½ sieve	0	0	0	0	Lettuce score	2	0	2	0
Kidney ½ sieve	3	6	4	0	Mushrooms pottle	1	6	2	6
Beet, Red doz.	1	0	3	0	Mustd. & Cress, punnet	0	2	0	6
Broccoli bundle	1	0	1	6	Onions bunch	0	4	0	6
Brussels Sprouts ½ sieve	2	0	2	6	pickling quart	0	6	0	6
Cabbage doz.	1	0	2	0	Parley doz. bunches	4	0	6	0
Capsicums 100	1	0	2	0	Parsnips doz.	0	3	1	6
Carrots bunch	0	5	0	8	Pears quart	0	0	0	0
Cauliflower doz.	0	0	0	0	Potatoes bushel	8	6	4	0
Celery bundle	1	0	2	0	Radishes doz. bunches	0	0	0	0
Cucumbers each	0	6	1	0	Savoy doz.	0	0	0	0
pickling doz.	1	0	3	0	Sea-kale basket	0	0	0	0
Endive score	2	6	4	0	Spinach ½ sieve	2	0	4	0
Fennel bunch	0	3	0	0	Tomatoes ½ sieve	2	0	3	0
Garlic and Shallots, lb.	0	8	0	0	Turnips bunch	0	3	0	0
Herbs bunch	0	5	0	0	Vegetable Marrows doz.	8	0	8	0

TO CORRESPONDENTS.

•• We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

STORING FILBERTS (*Stella*).—These, as well as Cob-nuts, should be left in the husks, put into earthenware jars, and placed in a cold damp cellar.

VERONICAS (*M. H.*).—As there are about 130 species, exclusive of a multitude of varieties, we cannot undertake to publish their names and colours. If you refer to the "Cottage Gardeners Dictionary" you will find them there.

BURN PEAR AND APPLE TREES (*An Old Subscriber*).—To give "full particulars," such as you require, would require a whole page of our Journal. Buy Rivers's "Miniature Fruit Garden."

BURNER'S BURNER.—In answer to "G. S." it may be obtained at any philosophical instrument maker's, and at many of the large gasfitters' shops in any large town. I do not remember the exact price, but it is only a few shillings.—A. W. W.

CINERARIAS WANTED TO BLOOM (*Gardener*).—As the plants are now throwing up their bloom-stems, and you wish them to flower, you must not stop or pot the plants, but place them near the glass, and admit abundance of air, guarding against injury from green fly by fumigating with tobacco on its first appearance. They will bear slight forcing, a temperature of from 45° to 50° being warm enough; but they must be kept close to the glass, affording at the same time abundance of fresh air.

FUCHSIA LEAVES SPOTTED (*E. M. W.*).—We do not observe anything the matter with the leaves except that they are assuming their autumn tints, and appear as if splashed with thin whitewash, which may be due to syringing the plants with water holding lime in solution. In other respects the leaves appear healthy.

ORANGE TREE FROM A PIP (*Idem*).—It will bloom most assuredly; and how it has been growing for ten years without blooming is a puzzle. We have bloomed them frequently at four and six years old. If you are tired of waiting, you may graft it in spring, plunging the pot in a hotbed in April, and when it breaks or sends out shoots, put in grafts by side-grafting, leaving a couple of inches of the scion below the union, so that this heel may dip into a phial containing water, fastened by the neck to the stem of the stock, at a suitable height. You may also inarch, which is the surest of all modes of grafting, or bud it; in the latter case putting in the eyes from half-ripened wood, any time from June to August. The operation is performed in the same way as with Roses.

CINERARIA MARITIMA AND CENTAUREA CANDIDISSIMA PROPAGATING AND WINTERING (*T. S.*).—This Cineraria, you say, is not hardy with you; and such is the case in many places, for this simple reason—the soil is too damp and rich. On dry gravelly soils, and on rockwork, it is perfectly hardy; and the way we keep it over the winter is to transplant it in autumn to the foot of a south wall, where we allow it to remain until spring, when we plant in its proper position, and by dividing the large roots obtain sufficient plants to fill the space previously occupied. In some soils and situations Cineraria maritima will not live. You may, therefore, take up a few plants and pot them in any light loamy soil, keep sparingly supplied with water, and winter in a dry airy situation in the greenhouse. In February place in a temperature of 55° or 60°, which will encourage the production of side-shoots. When these are of sufficient size to make into cuttings of three joints, cut them across transversely below the lowest leaf, and remove it and the next above it, leaving one with the growing point at top. Insert the cuttings in moist silver sand, and plunge the pot in a bottom heat of from 75° to 80°. Place a bell-glass over the cuttings if the atmosphere of the house is dry, but if it is calm and moist the bell-glass may be dispensed with. Keep the sand moist, but avoid wetting the foliage. If the sand be kept very wet the cuttings will damp off. They will root in a fortnight or three weeks, and may then be potted. Continue them in heat until established; then remove to the greenhouse and gradually harden-off prior to planting-out. Centaurea candidissima requires the same treatment, only the cuttings must be taken off close to the stem of the old plant, so as to have a heel; and they should not be planted out so soon by a month, or not before the beginning of June. These Cinerarias may be raised from seed sown in February; but the foliage is not so bright in colour as that produced by cuttings from old plants.

GERANIUM LEAVES TURNING YELLOW (*Gardener*).—We are unable to detect anything the matter with the leaves enclosed, and think they are yielding to natural decay through age. Want of water at the root may have hastened their early maturity. In other respects we do not see anything the matter with them. You may cut the plants down now, and they will push again before winter; and when the shoots are an inch or two long they may be potted, reducing the ball considerably. Such plants will bloom splendidly next year in April and May.

SEA-KALE FORCING FOR CHRISTMAS (*Idem*).—To have it ready at Christmas the roots should be placed in a temperature of from 55° to 60°. Under the stage of a stove will do well, and an inverted flower-pot, with the holes stopped up, will answer for blanching the shoots, putting it on in the second week in November. If you force the plants where they grow, hot dung should be placed on the pot about the same time, or six weeks before it is wanted for use. The roots will not do to force twice. The shoots are weak enough from the early forcing, and they are useless for forcing again before a matured growth takes place.

GRAPES SHANKING (*J. W. H. Lancashire*).—As the Vines did so well last year, would it not be advisable to try them another year? Perhaps they had too heavy a crop or wanted watering, if ever they do want it in Lancashire, for in the south it has been so dry. However, if you resolve on raising the roots, you cannot do it too soon to secure fresh roots. The material you speak of (the top spit of a pasture), will do very well if thrown up at once. It will do with little lime if you take a thin film of turf off, which will make a nice heap for potting, and use the other turf after the grass is removed 2 or 3 inches deep. When turf is used at once, and then with a good deal of grass in it, it is apt to heat too much. Move the flags.

NAME OF DIANTHUS (*W. F.*).—It is one of the legion of Indian Pinks not one of which has a name. Seeds from it would produce plants not one of the flowers of which, probably, would be like those of the parent.

PEACH-HOUSE (*A Seven-years Subscriber*).—We think your proposed arrangements will answer very well. We would have preferred a double ridge-board, covered with your cap at apex, the ridge-boards a foot apart, and a swing ventilator between them. We would move the two pipes close to the front farther in by 2 or 3 feet, if you mean to plant the trees there, within 15 inches or so of the glass. You have ample piping, six rows (four might do); but you are quite right to have six, as they need never then be too warm; and you will be able to coat them with sulphur from the time the buds break, and that is the best safeguard against red spider. Such a house would be best with its ends north and south, or its side south-east and north-west, and, a true span would look best. We presume one side of your's faces the north considerably, and that, too, will answer well enough. We do not see clearly the object of having pipes in the chamber, beneath the outside border for the early house, to be covered with glass under the present arrangements; but if, in addition to the 9 or 12 inches of rubble beneath your 2½-feet-deep border, you placed open conduits of pipes, such as small round drain-pipes, every 3 feet or so across the bottom of the house, among the rubble, and raised these lines of pipes several places above the surface of the border at the back, then these two pipes in the chamber would give a mild heat to the border throughout when you commenced forcing. The top of the pipes at back might be plugged, and opened when a moist air was deemed necessary. You will not have too many trees at first; but most likely two trees for each side will ultimately be enough, unless you root-prune. For such a house half-standards will be better than standards. *Early House* (Front).—One dwarf Elvage Nectarine, one Violette Hâtive ditto, one half-standard Noblesse Peach. (Back).—Half standards: one Early Grosse Mignonne Peach, one Barrington, one Roman Nectarine. *Late House* (Front).—One dwarf Walburton Admirable Peach, one dwarf Téton de Venus, one half-standard Roman Nectarine. (Back).—One half-standard Peach, Salway, one Galande or Chancellor (if very late), one dwarf Pitmaston Orange Nectarine.

VINES IN BALCONY Vinery (*A Five-years Subscriber*).—The Apples sent are Barchard's Seedling, correct, a good cooking Apple; and the other is the Winter Greening, a first-rate keeping Apple for kitchen use. For your raised balcony, greenhouse, and vinery, we would prefer that the border for the Vines should be made partly under the balcony, and also in front of it; and we would plant the Vines in front of the pillars, and enclose them in a three-sided wooden case, placed against the pillars, and the stems packed in sawdust. As this house, 15 feet by 10, is to contain Camellias, Rhododendrons, &c., with Vines overhead, and to be heated solely from the sitting-room, the door of which can be left open from 10 P.M. until 7 A.M., we would recommend that in severe weather in winter the fire should be replenished at bedtime. Everything will be safe enough if the soil in the Camellia pots do not freeze. If a small boiler were placed at the back of the fireplace, and pipes taken from it, the house would be still more secure, and the room-door might be shut at night. As the back wall of the house is now supplied with a Sweetwater Vine, and that is a beautiful Grape when well grown, we would not have more than four Vines on the roof, one at 3 feet from each end and the other two equally divided. To make the most of the Sweetwaters the house should be kept rather close when they are in bloom; and several times during the day in sunshine the dry hand, or a dry feather, should be drawn over the bunches, so as to promote free setting. But for your objection to the flavour of the Black Hamburgh, we would have recommended you to have two Hamburghs and two Royal Muscadines in such a house; but as you must have the Muscat flavour, we would advise two plants of the Muscat Hamburgh and two of the White Frontignan. The Muscat Hamburgh was very fine in Mr. Lane's orchard-house last season, but that house is now heated. For variety you might have one Muscat Hamburgh and one Esperione, or one Lady Downes', which would prolong the season of Grape-gathering. We have ripened White Frontignan without fire heat. If you had not a Sweetwater against the back wall, we would have recommended Buckland Sweetwater; but though a nice Grape, and hardy, it has no Muscat flavour, which you wish; and although the berries of the White Frontignan are rather small, they are exceedingly rich, and for our own eating we prefer them to the Muscat of Alexandria. For strong Vines that would give you a little fruit next season, with not less than 9 feet of good stem, you would have to pay, we presume, from 5s. to 15s. each, according to strength and prominent eyes. We would advise you, however, not to take much from them the first season. For such Vines the first thing to be avoided is stagnant water, and, therefore, a drain from the border will be necessary. Above that it will be advisable to have a foot of rubble, of clinkers, stones, brickbats, &c., and then from 18 to 24 inches of soil. If fresh rough loam all the better; and it may have a tenth part of brick rubbish and a twentieth part of rotten dung mixed with it, along with eight or ten bushels of broken or bruised bones. We would use little cocoa-nut refuse, but a few bushels will do good. We would prefer a rather thick mulch in shade in early spring, fixed on the roof inside by rings. It will keep out nearly as much cold as frigid domo, and it will be more pleasant to look through during the day. After the Vines grow and fill the house, such a shade will not be wanted after May. The blinds may be hooked on with rings, a foot or so from the glass.

PEARLGRASS (*T. S. S.*).—The variety to which you refer has not as yet been sent out.

ALLIGATOR PEAR (*D. C.*).—Sow the pips in equal parts of loam, peat, and leaf mould, next March, and plunge the pots in a hotbed at 80° or 85°. When up and growing repot, and place in a stove, giving them the same treatment as stove plants generally. Unless you have room to accommodate a good-sized Apple tree in your stove you will make poorly out in growing this tree for its fruit, for it attains a height of 40 feet. It is from the West Indies.

STRUTHIOPTERIS GERMANICA (E. G. H.).—By *Struthiopteris germanica* we conclude you mean *Struthiopteris germanica*, or Ostrich Feather Fern, which is quite hardy, and will grow in shady rockwork and shrubberies. It forms noble circular crests of great elegance and beauty, often 3 feet across, and increases rapidly by underground stolons, and the neighbourhood soon becomes densely covered. It is from central Europe. It is fully described in our "Fern Manual."

FRAME LIGHTS (Melon Grower).—The most suitable lights are those made of well-seasoned red deal, though pitch pine is a more durable timber. The frame should be made strong, but as light as possible, the sides and ends of the lights 3 by 2½ inches, morticed and tenoned at the corners. You may have, at equal distances apart, three sash-bars, 1½ by 2½ inches, narrow side upwards, which will be rebated three-quarters of an inch for the glass to rest on. This will require glass 9½ inches wide, and 21½ inches long, which is the size we would have. Twenty-one-ounce sheet glass of good quality will answer perfectly. Any carpenter can make the lights, but you will be well served by any of the horticultural builders who advertise in our columns.

POTTING AGAPANTHUS UMBELLATUS (C. M. Major).—You may pot this beautiful African Lily immediately after it has done blooming; and remove the offsets from *Lilium giganteum* at the time of potting, which may be now or in March. We do not know in what way you could facilitate the ripening of the *Lilium* seed-pods, unless by an increase of heat, and exposure to more intense light.

CUTTINGS OF VARIOUS PLANTS (Idem).—Half-ripened shoots of *Brugmansias* will strike freely at any time in a mild bottom heat, and so will cuttings of *Passifloras*, which may be taken now, but we like them a little earlier. The best time to take cuttings of *Escallonia rubra*, and *Acacia longifolia*, is when they have half-ripened shoots upon them, or young growths of a firm texture to the touch, which should be put in as early in the summer as possible. Cuttings of any plant will root much more freely in the early part of summer than in the autumn.

MOVING BUDDING BRIARS (W. A.).—You may remove them safely any time in November. They will move more safely at that time than if they were allowed to remain another year before moving. November, February, and March are the best seasons for removing them. The former period is best.

ORNITHOGALUM THYRSOIDES (E. G. H.).—We do not know the variety *alba*. *Ornithogalum thyrsoides* is from Natal in South Africa, and all but, if not quite, hardy. Being of doubtful hardiness it should have the protection of a cold pit or cold greenhouse. It should be potted in September in pots of a suitable size, 6 or 8-inch, in light turfy loam two-thirds, leaf mould one-third, with a free admixture of sand. Peat is preferable to leaf mould, unless the latter be of good quality, but a little of both will not be amiss. It is not unusual for the plant to show for bloom at Christmas, throwing up stems from 1 to 1½ foot high, with a spike of snow-white flowers having a yellow centre arranged in the form of a sceptre. The flowers individually are of a good size and neatly formed, opening at the bottom first, and in many cases more than fifty flowers will be borne on a spike, and occasionally one hundred. It blooms for three or four weeks if not kept in a high temperature, and has the property of remaining in full bloom in a cut state in water. It is both easy of cultivation, and one of the best things introduced of late years.

CALCEOLARIAS IN EXPOSED POOR SOIL (Idem).—We have them this year on a poor light soil over gravel, and they have done famously. We might as well let you into the secret of how we accomplish this when others have failed even on strong soil, such as the *Calceolaria* likes. In November we take out the soil to the depth of 2 feet, place 6 inches of fallen tree leaves at the bottom, and then replace the soil. We plant the beds with bulbs, such as *Crocuses*, *Tulips*, &c.; and when these come off, by the first week in June, 6 inches of well rotted manure is forked into the bed, and trodden firm. We plant and give a good soaking of water, and afterwards twice a week until the plants become established, and a sprinkling overhead on the evening of hot days. In July we mulch the beds with an inch of Mushroom-bed dung, and give a thorough soaking of water, and in ordinary seasons we have splendid beds, and never finer than this year, especially of yellow. Should the summer prove dry we water twice a week, every other time with liquid manure. *Canariensis*, *Aurea floribunda*, *Amplexicaulis*, *Rugosa major* (a hardy early kind), *Sage's Yellow* (a strong-growing kind), *Yellow Dwarf*, *Cloth of Gold*, and *Yellow Prince of Orange* are excellent yellow sorts, which we find do well on light soil with the above treatment.

BOOK (Perseverantia).—"The Cottage Gardener's Dictionary" will, perhaps, suit you. If you wish to have fuller botanical descriptions you must have Loudon's "Encyclopædia of Plants."

NAMES OF FRUIT (H. R.).—1, *Styrisc*; 2, *Catillac*; 3, *Beurré Diel*; 4, *Chaumontel*; 5, *Beurré Langeller*; 6, *Bishop's Thumb*; 7, *Franklin's Golden Pippin*; 11, *Downton Pippin*. Others not identified. (*St. Leger*).—1, *Bull's Golden Reinette*; 2, *Nelson Codlin*; 4, *Dutch Mignonne*; 5, *Kibston Pippin*; 6, *Broughton*; 8, *Passé Colmar*. Others not identified. (*New Forest*).—1, *Bele et Bonne*; 2, *Crassane*; 3, *Comte de Lamy*. (*C. T. J.*)—2, *London Pippin*; 3, *Lamb Abbey Pearmain*; 5, *Yorkshire Greening*; 6, *Scarlet Nonpareil*; 9, *Beurré Diel*; 10, *Pile's Russet*. Others not identified. (*G. H.*).—1, unknown and worthless; 2, *Golden Reinette*; 3, *Dumelow's Seedling*; 4, *Chester Pearmain*; 5, unrecognised; 6, *Selwood's Reinette*. (*B. A. N. Shrewsbury*).—21, *Herefordshire Pearmain*. The others unknown and very inferior. (*A. B.*).—The *Grape No 1* wants more heat. The specimen is abortive. Graft a *Black Hamburgh* upon it. No. 2 is very little better. We cannot identify either. (*J. Everett*).—1, *Yorkshire Greening*; 2, *Dumelow's Seedling*, apparently, but a wretched specimen; 3, *Kerry Pippin*; 7, *Gravenstein*; 9, *Beauty of Kent*. The others were undistinguishable.

NAMES OF PLANTS (Cicely).—We reply—1, *Athyrium Filix-femina*; 2, *Lastrea ciliolata*; but there is little evidence in the wretched scraps sent. Correspondents who send such specimens must suppose us to be magicians. (*J. S.*).—1, *Lastrea Filix-mas cristata*; 2, *Lastrea spinulosa*; 3, *Lastrea Filix-mas*; 4, *Lastrea Filix-mas paleacea*. (*F. C.*)—*Plumbago L. repens*, we think, but the flowers were much crushed. (*A. B.*)—1, *Nephrolepis tuberosa*; 2, *Pteris cretica*. (*An Old Subscriber*).—1, *Dabœdia polifolia*; 2, *Eriogonum vagans*, var. *alba*; 3, *Chelone glabra*; 4, *Scilla* to be a scrap of *Linaria striata*; 5, Apparently some *Boragewort*, but we cannot name it without the flowers. (*W. L.*)—We cannot name your tree without seeing the flower.

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

POULTRY SHOW AT THE AGRICULTURAL HALL, ISLINGTON.

OCTOBER 1ST, 3RD, AND 4TH, 1884.

We believe we are correct in stating this is the first Show held under the immediate patronage of the Poultry Club. The building leaves nothing to desire, and its management by Mr. Douglas deserves high commendation. There are few places in the United Kingdom where fowls can be cared for as judiciously as they were here. We use the word advisedly, because in some places kindness and good intentions unwisely directed do more mischief than any neglect. The perfect cleanliness visible everywhere was pleasing, and the most fastidious could detect no unpleasant smell.

The Show was looked forward to by amateurs as the first test of judging by rules. The Club, however, does things by halves. After a troubled labour of twelve months the rules should be ready, and they should be public. When the catalogue is headed by the announcement, "Under the Patronage and Management of the Poultry Club," each class should have a copy of the rules by which the birds were judged. This would explain many things that should be understood by exhibitors, and still more by those who fill the office of Judge. Where liberty of action is denied, and a man is pinned to rules, it is no longer the decision of a Judge, but the verdict of a book. If that book were in our hands we should probably have little to say; but as it appears to be printed only for a few, we must judge the tree by its fruits.

There was a very good class of *Dorkings*, but in this, as in all others, Lady Holmesdale's pens were empty. The first and second prize birds were good; but in our opinion pen 17, belonging to Captain Hornby, was the best pen in the class. In Class 2, for White and Silver-Grey *Dorkings*, the first-prize Silver-Grey cock had a black and white breast. We preferred Mr. Lingwood's White *Dorkings* to the Rev. G. F. Hodson's. We liked Mr. Boyle's pair of pullets, but could find no merit in Mr. Sutherland's.

The first-prize *Spaniards* were very good. We did not at all like the second-prize birds. It was a poor class. We liked Mr. Boyle's second-prize *Brahmas* better than Mr. Barclay's first. These latter were vulture-hocked, which has not hitherto been deemed desirable.

The *Cochin* prizes would have been reversed according to the old system of judging. Mr. Chase would have been first. Capt. Heaton's birds are sadly out of condition. The White *Cochins* were the best and largest class we have seen for some time, but here we should have altered the awards, by putting the third first.

The *Game* did not come up to the old standard. Twisted combs and squirrel tails were not approved formerly, but they were plain in some classes. In Class 23, a third prize was given to two pullets with distinctly red deaf ears. In Class 27, Mr. Duxbury's Black *Hamburghs* were every way superior to Mr. Beldon's, which had first prize.

In the variety of *Bantams* we cannot understand why Piles that contribute one pen, should override a good class of *Duckwings*. In the Gold and Silver-laced we liked Mr. Jones's second better than Mr. Spary's first. The cock in the latter had a very narrow comb.

The *Spanish* cock in 381 had a distinct thumb mark in his comb, and the *Brahma*, 398, was a poorly-conditioned bird.

We liked the second-prize Rouen *Ducks* better than the first.

The *Geese* were excellently judged. We have thus reviewed the 509 pens which composed the Show of Poultry. We know little of Pigeons, and the gentleman who promised to report upon them was unable to attend.

We have been obliged to report of this Show differently from our usual method. It may be that impartiality in reviewing a show is as difficult as strict veracity is in history, according to Lord Macaulay. We were unwilling to trust entirely to ourselves for this reason, and, therefore, consulted many others. Their testimony agrees with our own. We have reviewed this Show as the test of judging by rules. We have felt throughout it was an unthankful task. Our

feeding has been, that book-judging is impossible. We are more than ever convinced that it would break up exhibitions; but if it is desirable that it should be adopted, let the rules be published and canvassed by those who have the greatest interest in them. It is manifestly unfair to Judges to publish that they shall decide by rules which are unknown to those who have to report on the judgments.

DORKINGS (Coloured, except Silver-Gray).—First, J. Frost, Parham, Suffolk. Second, R. W. Boyle, Dublin. Third, C. Priest, Worthing, Highly Commended, A. Stamford, Eakons, Sussex; J. Anderson, Meigle, Forfarshire; Capt. Hornby, Prescott. Commended, R. W. Boyle.

DORKINGS (White or Silver-Gray).—First, A. Anderson, Meigle, Forfarshire. Second, Rev. J. F. Newton Kirby-in-Cleveland. Third, Rev. G. F. Hodson, North Petherton. Highly Commended, H. Lingwood, Needham Market, Suffolk. Commended, Sir St. G. Gore, Bart., Wirksworth, Derbyshire.

DORKINGS (Coloured or White).—First, R. W. Boyle, Dublin. Second, R. B. Postans, Brentwood. Third, J. Sutherland, Malingar. Highly Commended, R. W. Boyle.

SPANISH.—First, W. Bone, Bristol, and J. Rodbard. Second, A. Heath, Calne, Wilts. Third, W. Cannon, Bradford, Yorkshire.

SPANISH (Dark).—First, W. T. Barclay, Leyton. Second, R. W. Boyle. Third, C. Priest, Worthing. Fourth, H. Lacy, Hebden Bridge, Yorkshire. Highly Commended, H. Lacy; C. Priest.

SPANISH (Light).—First and Second, J. Pares, Chertsey. Third, J. Clarke, Chiswick.

SPANISH.—First, R. W. Boyle. Second, J. Minton, Hinton, near Bath. Highly Commended, W. T. Barclay, Leyton. H. Lacy, Hebden Bridge.

COCHINS (Brown or Partridge).—First, T. Stretton, Osm-kirk. Second, E. Tudman, Whitechurch, Salop. Third, Cartwright, Oswestry. Highly Commended, Rev. G. W. Hodson, North Petherton, Bridgewater.

COCHINS (White or any other colour).—First, W. Dawson, Hopton, Wirfield. Second, F. W. Zurhorst, Dublin. Third, Rev. F. Taylor, Keastwick, Westmorland. Highly Commended, R. Chase, Birmingham; G. Lamb, Wolverhampton; H. Yardley, Birmingham; F. W. Zurhorst. Commended, F. W. Zurhorst.

COCHINS (Cinnamon or Buff).—First, Capt. Heaton, Manchester. Second, Rev. W. C. E. H. D'Aeth, Arbrofield, Reading. Third, E. Chase, Balsall Heath, Birmingham. Highly Commended, H. Bates, Birmingham; J. Croeland, jun., Wakefield; Capt. Heaton. Commended, Rev. C. Spencer, Attleborough. **CHICKENS**.—First, J. Croeland, jun. Second, F. W. Zurhorst, Dublin. Commended, H. Bates; F. Gardiner, St. Peter Street, Islington.

GAME (Black Red).—First, T. Dyson, Halifax. Second, W. T. Everard, Leicestershire. Third, A. B. Dyas, Madeley, Shropshire. Commended, S. Mathew, Stowmarket.

GAME (Brown or other Reds, except Blacks).—First, Second, and Third, J. Fletcher, Stoneclough.

GAME (Duckwings, Greys or Blues).—First, E. Aykroyd, Bradford. Second, S. Mathew, Stowmarket. Third, J. Fletcher, Stoneclough. Commended, S. Mathew.

GAME (White or Pies).—First, S. Mathew. Second, J. Fletcher. Third, Miss E. Crawford, Farnfield, Notts.

GAME (Any other colour).—Prize, J. Fletcher, Stoneclough.

GAME (Reds).—First, J. Fletcher. Second, Sir St. G. Gore, Bart., Wirksworth, Derbyshire. Commended, J. Wood, Wigan.

GAME (White or any other colour).—First, J. Halse, Ince, near Wigan. Second, J. Fletcher, Stoneclough.

POLANDS.—First and Third, G. C. Adkins, The Lightwoods, near Birmingham. Second, H. Beldon, Bingley.

HAMBURGERS (Gold-pencilled).—First, T. H. Ashton, Tamworth. Second, C. M. Boyde, Rochdale. Third, F. Pitts, jun., Newport, Isle of Wight. Highly Commended, J. Robinson, Garstang.

HAMBURGERS (Silver-pencilled).—First, Sir St. G. Gore, Bart., Derbyshire. Second, J. Robinson. Third, Miss H. Sharp, Bradford.

HAMBURGERS (Golden-spangled).—First, G. H. Hyde, Ashton-under-Lyne. Second, Sir St. G. Gore, Bart. Third, J. Roe, Haddfield, near Manchester.

HAMBURGERS (Silver-spangled).—First, H. Beldon, Bingley. Second, T. Davies, Newport, Mon. Third, Mrs. H. Sharp, Bradford.

HAMBURGERS (Pencilled).—First, J. E. Powers, Biggleswade, Beds. Second, Sir St. G. Gore, Bart.

HAMBURGERS (Spangled).—First, H. Beldon, Bingley. Second, Sir St. G. Gore, Bart.

ANY OTHER VARIETY.—First, H. Beldon, Bingley. Second, N. Sykes, Remond Road, Old Ford. Second Extra, Miss C. H. Ballance, Taunton. Third, H. Saville, Rufford Abbey. Third Extra, F. W. Zurhorst, Dublin.

BANTAMS (Red Game).—First, J. W. Kelleway, Merston, Isle of Wight. Second, Miss E. Crawford, Southwell, Notts. Third, Rev. G. Raynor, Brentwood. Highly Commended, J. Croeland, jun.; Sir St. G. Gore, Bart.; J. Munn, Stoneclough; R. B. Postans, Brentwood, Essex; R. Swift, Southwell, Notts.; Capt. Wetherell, Loddington.

BANTAMS (Any other variety).—First, R. Swift, Southwell, Notts. Second, J. W. Kelleway, Isle of Wight. Third, J. Home, Prescott, Lancashire.

BANTAMS (Gold or Silver-laced).—First, W. Spary, Dunstable. Second, E. Jones, Clifton. Third, W. Spary. Commended, E. Jones.

BANTAMS (Black or White, Clean-legged).—First, Sir St. G. Gore, Bart. Second and Third, F. Pitts, jun., Newport, Isle of Wight.

BANTAMS (Any other variety).—Prize, P. W. Storey, Daventry.

DORKINGS (Coloured or White).—First, C. Priest, Muntham Court, Worthing. Second, Rev. J. G. A. Baker, Biggleswade. Highly Commended, R. W. Boyle; C. Priest. Commended, A. Stamford, Ashurst, Surrey; H. Lingwood, Suffolk.

SPANISH.—First, E. Draper, Northampton. Second, W. E. Bell, Newport Pagnell. Commended, A. Heath, Calne, Notts.

SPANISH.—First, J. Wright, Suffolk. Second, W. E. Hammond, Ipswich. Highly Commended, R. W. Boyle; J. Hinton; H. Lacy; J. Wight. Commended, W. T. Barclay, Leyton.

COCHINS (Cinnamon or Buff).—First, C. E. Reddick. Second, F. W. Zurhorst, Dublin. Highly Commended, Capt. Heaton, Manchester; H. Bates, Birmingham.

COCHINS (White or any other colour).—First, F. W. Zurhorst, Dublin. Second, E. Tudman, Whitechurch, Salop.

GAME (Black-breasted Reds).—First, H. W. H. W. Fitzwilliam, Rotherham. Second, A. D. Dyas, Madeley, Shropshire.

GAME (Brown-breasted or other Reds except Black).—First, T. Statler, Manchester. Second, J. Wood, Moat House, near Wigan.

GAME (White or any other colour).—First, P. Jones, Drayton, Salop. Second, Sir St. G. Gore, Bart.

HAMBURGERS (Pencilled).—First, H. Beldon, Bingley. Second, F. Pitts, Newport, Isle of Wight.

HAMBURGERS (Spangled).—Prize, Sir St. G. Gore, Bart.

BANTAMS (Game).—First, J. W. Kelleway, Merston. Second, M. Auckland, Chesterfield. Third, J. Munn, Shawcough, Manchester. Highly Commended, Sir St. G. Gore, Bart.; R. Swift, Southwell, Notts; M. Turner, Preston. Commended, Rev. G. Raynor, Brentwood.

DUCKS (Aylesbury).—First, Second, and Third, J. K. Fowler, Prebenda Farm, Aylesbury.

DUCKS (Rouen).—First, R. W. Boyle, Dublin. Second, C. Pease, Southend, Darlington. Third, W. T. Barclay, Leyton. Highly Commended, F. Statler, Manchester; J. Rodbard, Wrington, Bristol.

DUCKS (Any other variety).—First and Third, T. H. D. Bayley, Biggleswade. Second, F. W. Earle, Prescott, Lancashire. Highly Commended, T. Statler, Manchester. Commended, Miss C. H. Ballance, Taunton.

GESE (White).—Prize, R. W. Boyle, Dublin.

GESE (Grey or Mottled).—First and Second, R. W. Boyle, Dublin. Third, Mrs. M. Seamons, Aylesbury.

ORNAMENTAL WATER FOWL.—First, Second, and Third, H. Saville, Rufford Abbey.

TURKEYS.—First, J. Smith, Stafford. Second, R. W. Boyle, Dublin. Third, W. Wright, Fulbourn, Cambridgeshire. Highly Commended, P. W. Storey, Daventry. Commended, W. Wright.

PIGEONS.

POWERS (Cocks).—First, G. R. Potts, Sunderland. Second, R. Fulton, Deptford. Third, F. Elze, Baywater. Highly Commended, R. Fulton, Deptford; S. Robson, Brotherton, Yorkshire. Commended, F. Eden, Salford. (Hens).—First and Third, G. R. Potts. Second, F. Eden, Salford. Highly Commended, P. Fulton, Deptford. Commended, J. Smith, Liverpool Road, Islington; G. R. Potts.

CARRIERS (Cocks (Black or Dun)).—Cap, P. Eden, Salford. Second, T. Colley, Sheffield. Third, A. P. Leite, Manchester. Highly Commended, F. Elze, Baywater. Commended, T. Colley; A. P. Leite.

CARRIERS (Hens).—First and Second, T. Colley, Sheffield. Third, F. Elze, Baywater. Highly Commended, P. Eden, Salford; F. Elze.

TUMBLERS (Almonds).—First, P. Eden, Salford. Second, F. Elze, Baywater. Highly Commended, J. Ford, Monkwell Street, London; F. Elze; M. Hall, Old Bethnal Green Road.

SHORT-FACED (Tumblers).—First, J. Percival, Rye Lane, Peckham. Second, H. Morris, Forest Hill, Kent. (Mottled).—First, P. Eden. Second, F. Elze. Highly Commended, P. Eden. Commended, C. J. W. Edd. (Balds or Beards).—First, H. Morris, Forest Hill. Second, J. H. Edd. Hammer-smith. Highly Commended, F. Elze; D. Foskik, Barnsbury.

TURBANS.—First, M. Wicking, Blackheath Park. Second, F. Elze, Baywater. Highly Commended, H. Yardley, Market Hall, Birmingham.

OWLS.—First, G. H. Sanday, Holme Pierrepont, Notts. Second, F. Eden. (The whole class Highly Commended.)

FAN-TAILS.—First, M. Wicking, Blackheath Park. Second, R. F. Jarvis, Holmstead, Kent. Highly Commended, F. Elze; J. W. Edge, Ashton-Newtown, Birmingham; S. C. Betty, Gloucester Gate, Regent's Park.

JACOBS.—First, M. Wicking. Second, C. Bulpin, Bridgewater.

TAMMERS.—First, C. Bulpin, Bridgewater. Second, F. Elze. Highly Commended, W. H. C. Oates, Newark, Notts. Commended, J. E. Robinson, Sunderland; H. Yardley, Birmingham.

MOUNTS.—First, T. D. Green, Saffron Walden. Second, J. Hardwill, Taunton.

HARES.—First and Second, P. Eden.

ANY OTHER NEW OR DISTINCT BREED.—First, Rev. C. Spencer; A. P. Leite. Second, M. Wicking. Third, A. Heath; H. Yardley. Highly Commended, H. Yardley; A. Heath, Calne, Wilts; S. C. Betty, Regent's Park.

CARRIERS (Except Blacks or Duns).—Cocks.—First and Second, W. H. Edmonds, Bromway, Westminster. Hens.—First and Second, J. C. Ord, Pimlico. Highly Commended, T. Colley, St. Philip's Road, Sheffield. Commended, W. Smith, Gray's Inn Road.

MAPOLES.—First, C. Bulpin, Bridgewater. Second, M. Wicking, Blackheath Park.

DEACONS.—First, J. Percival. Second, T. Whitley, jun., Halifax. Highly Commended, W. Massey, Gedney, near Wisbeach; H. Yardley.

NOSES.—First, M. Wicking. Second, J. W. Edge, Birmingham.

RABBITS.

LONGEST EARS.—First, J. Cranch, Portland Lawn. Second, W. Lock, Bedford Street, Walworth Road.

GREATEST WEIGHT.—First, J. Cranch. Second, W. Lock.

BEST COLOUR.—First, H. Hanford, Wilford, Nottingham. Second, Hall and Co., Plumstead. Highly Commended, Miss M. Hawkesley, Edgware Road. Commended, W. Philpott, Copenhagen Street, Islington; H. Hanford; J. Cranch; J. P. Miller, Whitechapel Road.

WOODSTOCK AGRICULTURAL SOCIETY'S POULTRY SHOW.—SEPT. 20TH.

ARRANGEMENTS had been made for a supply of pens from London, but from some cause they did not arrive, and the Committee were driven at the last moment to make the best provision they could. The Duchess of Marlborough won both the champion prizes for the best pens in the show. The Dorkings and Cochin-Chinas were a very superior class, and the Show generally was very creditable.

SPANISH.—*Chickens*.—Prize, F. S. Dodd, Hampton Poyle.

DORKING.—Prize, H. L. Caskell, Kiddington. *Chickens*.—Prize, Duchess of Marlborough.

BRANMAS.—*Chickens*.—Prize, Duchess of Marlborough.

COCHIN-CHINA.—Prize, F. S. Dodd. **Chickens.**—Prize, F. S. Dodd. **HAMBURGH (Spangled).**—Prize, J. James, Woodstock. **Chickens.**—Prize, W. Heath, Kidlington. **HAMBURGH (Pencilled).**—Prize, J. James. **Chickens.**—Prize, W. Heath. **GAME.**—**Chickens.**—Prize, R. Pratt, Woodstock. **GOELINES (White).**—Highly Commended, J. Prior, Woodstock. **GESE (Grey).**—Prize, Duchess of Marlborough. **Goslings.**—Prize, H. L. Gaskell. **Ducks (Aylesbury).**—Prize, Colonel Bowyer, Steeple Aston. **Ducklings.**—Prize, Duchess of Marlborough. Highly Commended, Colonel Bowyer. **Ducks (Coloured).**—Prize, C. Fowler, Bleicester. **Ducklings.**—Prize, S. Druce, Eynsham. **TURKEYS (Black).**—Prize, Duchess of Marlborough. **Poult.**—Prize, H. L. Gaskell. **TURKEYS (Grey).**—Prize, Colonel Bowyer. **Poult.**—Prize, Colonel Bowyer.

Judge, Mr. James Turrill, of Oxford.

ELLESMERE POULTRY EXHIBITION.

THIS forms part of the Oswestry District Agricultural Society's Exhibition, which it is wisely proposed shall be held in a different town each year. This arrangement adds very much to the interest of any similar meeting, as fresh localities are thereby enlisted in the undertaking, and, consequently, the novelty rather increases at each annual repetition than the contrary.

The Show, which was held on September 29th, proved a decided success; so much so, that the attendance of visitors must have shown an incredible increase; and the quality of the poultry present, equally with the number of pens entered, bore evident marks of improvement likewise. On referring to the catalogue we find entries from Knowsley, Birmingham, Bristol, Liverpool, Aylesbury, and even from such a distance as Dublin. This shows as strongly as could be that the public feeling is now interested in the success of the undertaking, nor do we doubt that eventually this Society will rank highly among our poultry shows. A little confusion as to the numbers when compared respectively with the pens and the printed catalogue was the only drawback to the proceedings, and we trust that in future years a similar occurrence will be especially guarded against.

The *Game* classes took foremost position, the Brown Reds and Black Reds being very good ones; but the Duckwings were far from so satisfactory in plumage as could be desired. The hackles of the cocks were mostly dark listed down the centre of each feather, or what is perhaps equally objectionable, mixed irregularly with black patches. We mention this shortcoming in the hope of preventing a selection by their owners in future years so fatal to prize-taking. Some very good Grey *Dorkings* were shown, but some of this variety were exhibited in very bad condition indeed. There were several pens of good *Cochins* shown, particularly the White ones from Mr. Zurhorst, of Donnybrook, Dublin; the Partridge-coloured ones of Messrs. Tudman and Cartwright respectively; and the Buffs of Mr. Bates, of Birmingham. There were also good *Hamburghs*, but Mr. John Robinson, of Vale House, Garstang, Liverpool, monopolised all four prizes in these classes. All *Bantams* competed together, and, most strangely, none but *Game Bantams* were entered. Most of these wanted age to make them fit for the show pen, though not a few bore traces of very careful breeding.

The *Turkeys* were excellent; and the *Geese* were especially objects of public interest, on account of their immense development of both bone and flesh. The Aylesbury *Ducks* were better than the Rouens, and weighed well, Mrs. Seamons's first-prize pen being 22½ lbs. the three birds; Miss Shaw's, second-prize birds, were 21½ lbs.; and even the highly commended pens were 20 lbs. and 21 lbs. respectively. From these weights it may be presumed that they were of unusually excellent character as a whole class. Among the 'Extra poultry' were a pen of capital White Decoy or Call Ducks. The weather throughout was as fine as possible, so much so, that not a spot of rain fell to mar the happiness of the day. Everything, therefore, passed off most pleasantly, and the whole undertaking proved a decided success.

GAME (Black-breasted and other Reds).—First, T. Whittingham, Batherton, Nantwich (Brown-breasted Red). Second, S. Johnson, Nantwich (Black-breasted Brown). Highly Commended, T. Burgess, Burleydam, Whitechurch; A. B. Dyan, Madeley, Salop (Red); J. Tomley, Whittemere (Black-breasted); W. Gamon, The Green, Thornton-le-Moors, Chester (Black-breasted). Commended, W. Drury, Harleston, Nantwich, Cheshire (Black Red); P. H. Cooke, New Marton (Brown-breasted); W. Gamon (Brown-breasted Red).

GAME (Any other variety).—First, A. B. Dyan, Madeley, Salop. Second, J. B. Chune, Severn Cottage, Coalbrookdale. Commended, Miss Sadler, Heath Cottage, Whitechurch.

DORKINGS.—First and Second, Miss Davis, The Lache, Chester. Highly Commended, E. Shaw, Plas Wilmot, Oswestry; E. Tudman, Ashgrove, Whitechurch; W. Gamon, The Green, Thornton-le-Moors, Chester.

COCHIN-CHINA.—First, E. Tudman, Ashgrove, Whitechurch (Brown or Partridge). Second, P. Cartwright, Oswestry (Partridge).

COCHIN-CHINA (Any other variety).—First, T. W. Zurhorst, Bellville, Donnybrook, Dublin (White). Second, H. Bates, Harborne Heath Cottage, Birmingham (Buff).

SPANISH.—Miss Davis, The Lache, Chester (Black). Second, E. Shaw, Plas Wilmot, Oswestry (Black).

HAMBURGH (Pencilled).—First and Second, J. Robinson, Vale House, Garstang, Liverpool.

HAMBURGH (Spangled).—First and Second, J. Robinson, Vale House, Garstang, Liverpool. Commended, C. Cooke, Bredenheath, Whitechurch.

GAME AND OTHER BANTAMS.—First, S. Owen, Ellesmere. Second, T. Hassall, Whitechurch. Highly Commended, W. Gamon, The Green, Thornton-le-Moors, Chester. Commended, C. B. M. Owen, Erway, Ruabon; T. Burgess, Burleydam, Whitechurch.

TURKEYS.—First, Miss Davis, The Lache, Chester. Second, T. Burgess, Burleydam, Whitechurch. Highly Commended, R. Topham, Elson, Ellesmere; R. Lewis, Sycamore House, Hordley.

GESE.—First, Mrs. Seamons, Hartwell, Aylesbury. Second, T. Burgess, Burleydam, Whitechurch.

Ducks (Rouen).—First, J. Holme, Knowsley, near Prescott. Second, W. Gamon, Thornton-le-Moors. Highly Commended, J. Nelson, Heaton Mersey, Manchester.

Ducks (Aylesbury).—First, Mrs. Seamons, Aylesbury. Second, Miss E. Shaw, Oswestry. Highly Commended, Miss E. Shaw; Mrs. Seamons. Commended, B. W. Winn, Llanfardda Hall.

EXTRA POULTRY.—Highly Commended, G. Williams, Oswestry (White Call Ducks).

Mr. Edward Hewitt, of Sparkbrook, Birmingham, officiated as the Judge.

MIDDLETON AGRICULTURAL SOCIETY'S POULTRY SHOW.

(From a Correspondent.)

THE sixth annual Exhibition of the Middleton Agricultural Society took place on the 22nd ult. We published the prize list last week. The entry of Poultry, Pigeons, and Rabbits numbered 500, being about 100 pens in excess of last year. About 20,000 visitors were present, £588 being received for admission at the doors.

The principal classes were for chickens, and this neighbourhood being famed for *Hamburghs*, the competition was in many cases very close.

Red Game headed the list. Brown Reds were first and second. The cockerel in Mr. Wood's first-prize pen was late in feather, but a good chicken. Mr. Fletcher's second-prize pen were in much better condition; both cockerel and pullet were, however, rather defective in feet. In the single cockerel class a good Black Red was first, and a Brown Red second. In *Game* any other variety, a good pen of Piles took precedence, capital Duckwings being second. In *Single Cockerels* a white-legged Pile was first, and a Duckwing second. A silver cup, given by a few amateurs, was offered for a pair of *Game* pullets, and produced no less than forty-one pens, containing many good pullets. The cup was awarded to Mr. John Croasland, jun., for a splendid pair of Black Reds. Mr. Wood was second with a good pair of light Brown Reds, and Mr. Aykroyd third with an unusually good pair of Duckwings. The competition between the three pens placed was very severe indeed, the Judges had great difficulty in arriving at a conclusion, the pens being so evenly balanced in every point, Reds at length obtaining the preference. Several pens received commendations. *Spanish* were unequally matched in the winning pens. The first-prize pen contained a poor cockerel. For *Single Cockerel* a very even good-faced bird took first. *Dorkings* and *Brahms* formed good classes. In *Cochins*, Mr. Stretch was first with Partridge, good in shape and feather, but not a match in colour of legs; Capt. Heaton was second with a very fine pen of Buffs. For *Single Cockerels* excellent Buffs were first and second; and for a Pair of Pullets Capt. Heaton took first with good Buffs; Partridge were second. The *Hamburgh* classes were well filled, most of the prize birds being excellent, although we noticed some crooked in bone. In Silver-spangled there was a falling-off in good cockerels; Gold-spangled were better; Blacks were capital. For Any other variety, Black *Polands* were first, and Silvers second; while for *Single Cockerels* the positions were reversed. *Bantams* made up good classes, any age being allowed. In *Game* good Black Reds won for cock and two hens; while

for cockerel Black Red was first, and Brown Red second. In Bantams any other variety, Gold-faced were first, and excellent Blacks second.

In *Ducklings*, Aylesburys, Mrs. Seamons suffered a defeat, the first prize being awarded to a very fine pen belonging to Mr. J. Hartley. Rouens were also good.

The *Pigeons* were not numerous, but some very choice birds were exhibited, many of which, however, did not receive notice; in fact, the best pen was passed over. In *Almonds* the worst pair were first, Mr. Eden having to be content with the second position. In *Carriers* splendid Blacks won. In *Powters* the best pair of Blues, belonging to Mr. Eden, were not noticed. *Jacobins* were chiefly noticeable for odd eyes. In *Fantails* crested birds were first, and a fine pair of plain-headed second. In *Owls* the first went to poor Whites, the second to very coarse Silvers, Messrs. Eden and Fielding's fine Whites not receiving notice. In *Nuns* the first-prize pen contained a pair with odd eyes, the second were fair birds. In Any other variety a pair of splashed Trumpeters were first, and Black Barbs second; while a much superior pen of Barbs was unnoticed.

POULTRY JUDGES.

As one of the exhibitors I attended the Agricultural Show recently held at Middleton, and was sorry to hear the complaints current as to the character of the poultry judging, the awards accorded to some of the classes being of a nature to make it evident that the Judges were not competent for their task. It is not denied that one of the Judges is well qualified to decide on the merits of some kinds of birds, such as the Spanish, Hamburgs, &c.; and it is the more to be regretted that he should have undertaken to pronounce on the deserts of classes, where he had to rely more on the opinion of others than on his own judgment.

Judges must bear in mind that many of the exhibitors whose fowls they judge understand the peculiarities of those kinds which they are in the habit of rearing and exhibiting quite as well as the Judges themselves; and that the decisions of the latter are certain to be canvassed and scrutinised, and if they do not approach tolerably near to correctness will not fail to be condemned. It is, therefore, a great mistake when Judges undertake to decide on claims, often conflicting, between the several competitors in a class where the knowledge of the exhibitor is superior to their own; and they would confer an incalculable benefit by confining themselves to the classes with which they are acquainted. On the other hand, a contrary course frequently inflicts irreparable injury on the cause of poultry exhibitions. It occasions disappointment and well-grounded discontent among the contributors, and if permitted to occur with anything like frequency would ultimately defeat the object of these shows in the improvement of the various kinds of fowls, and also break up the exhibitions altogether.

One of the Stewards of the late Middleton Show, who possesses a good knowledge of the qualities of birds, I was glad to observe, was fully sensible of the anomalies in the poultry judging, and candidly admitted them when pointed out to him, expressing his sincere regret at their occurrence, intimating that they should not recur in any future Show.

Before closing this line, allow me to explain that it is not out of a captious or unfriendly disposition towards any party that I have taken up the pen, but in the interests of the exhibitors and exhibitions; and the circumstance that the only mode whereby what is wrong can be remedied is submitting it to the ordeal of public investigation, will be a sufficient apology for troubling you with this communication.—J.

BEEES, WASPS, AND IVY BLOSSOMS.

In a letter which I have received from my cousin, Mr. George Fox, of Kingsbridge, in the county of Devon, he gives a most interesting account of what has fallen under his notice, with respect to the ivy blossoms and the wasps. As his letter was not intended for publication, I extract the substance for the edification of others.

The bloom of the ivy in the neighbourhood of Kingsbridge is more abundant than has ever been known before. Down

a lane, known as the Back Lane, it may be seen in the most splendid luxuriance, the blossoms swarming with flies and wasps, the latter being in such numbers as to appear like a swarm of bees in the air. In the neighbourhood of Exeter at this date, the 27th of September, the ivy blossom is not much opened; and as for wasps, numerous as they have been, we have been troubled by very few within the last two weeks. But in Kingsbridge an almost Egyptian plague of wasps still exists.

Up to ten o'clock on the 26th, about the ivy in the lane, bees, flies, and wasps, were almost equally divided, the bees somewhat exceeding the wasps in numbers. An extraordinary excitement prevailed among all the bees in Mr. G. Fox's apiary in consequence of the great supply of honey and pollen. Although the day continued uninterruptedly fine and warm—external thermometer in the shade 63°, barometer 30.35—on revisiting the locality of the ivy bloom at two o'clock not one bee was to be seen on the ivy, very few flies, but thousands upon thousands of wasps. Every bunch of flowers had three or four wasps upon it. His bees had become suddenly quiet, but were about mignonette, fuchsias, &c., as usual. The wasps had established a perfect monopoly of the ivy, and the bees must have felt intimidated at their overwhelming numbers, and deserted the otherwise tempting pasture.

Last year, when wasps were comparatively scarce, the bees gained considerably in weight from the ivy blossom; but now it seems as if the bees had agreed to surrender the field unconditionally to the wasps. My correspondent concludes by expressing his belief that the pith of this matter is worthy of investigation by the entomologists of the day, irrespective of its singularity and interest to the apiarian.

I have told the tale of this close observer of nature in an imperfect manner, and without having obtained permission from him to do so. I wish he could be induced to give, from his own pen, the readers of the Journal the benefit of his observations more frequently. He has promised me that he will relate his experience with hives made of a new material. I trust he will do so, and that before long, as I am sure it must interest all apiarians.—S. BEVAN FOX, Exeter.

[We heartily coincide with this concluding wish.—Eds.]

QUEENS' EXCURSIONS—COMB PLATES.

Has Mr. Woodbury ever known young queens to take flights after positive evidence of impregnation?

Has he ever known virgin or drone-breeding queens lay eggs in the same year as they were hatched?

What is the longest period which has ever come under his observation between hatching and impregnation?

Can he inform me of the composition of the metal plates for making wax sheets?—S.

[Although the fact has never come under my own personal observation, I consider it proved on indubitable evidence that queens sometimes again take flight after a perfectly successful wedding trip. Huber was, I believe, the first who observed it, and his testimony has recently been confirmed by my accomplished apiarian friend "J. E. B." I have also just come across an article by Otto Rothe, a clever German apiarian, on this very subject, in which he states it as certain that some queens who have already returned with the sign of impregnation will yet take wing afterwards. He relates, in support of this conclusion, an instance in which he witnessed a young queen return with unquestionable evidence of her excursion having been successful on the 25th of last April. On the 27th she again took flight, apparently without any result, and a subsequent examination of the interior of the hive and the brood found therein, proved that the object of her flight must have been fully accomplished on the 25th.

I have on more than one occasion known drone-breeding queens lay eggs the same season in which they were themselves hatched.

The longest period I ever knew between hatching and impregnation occurred in 1862, when I had a queen which laid no eggs till she was thirty days old, so that she must probably have been twenty-seven or twenty-eight days old before making a successful wedding trip. Her worker sisters appeared to manifest impatience at this unusual delay, inas-

much as I found her rigorously imprisoned more than once; but ultimately all turned out right, and, as before stated, she commenced laying worker eggs when thirty days old.

Plates for impressing artificial combs are made of type metal.—A DEVONSHIRE BEE-KEEPER.

BEES AT THE EXHIBITION OF THE WHITWORTH AND ROCHDALE AGRICULTURAL SOCIETY.

We learn from the *Rochdale Observer* that "In centuries long past the good people of Rochdale every year, in the month of August, made an excursion into the marshes lying round the town to gather rushes to strew the stone or mud floors of their churches and chapels through the chill winter months. When the use of rushes for carpets had been superseded by less barbarous expedients the people preserved the memory of the custom by the pantomime of dragging a monster rushcart through the town for the edification of their friends and visitors. But in process of time this pantomime fell into evil hands and disrepute, becoming merely the excuse for a gross public scandal; and at last this scandal was suppressed by the public voice, the name only remaining to keep alive the recollection of a fine old religious custom.

"The great feature of the rush-bearing week, for several years past, has been the exhibition of the Whitworth and Rochdale Agricultural Society; and this year that Society has had probably the most successful, and certainly the most satisfactory, of its meetings.

"With regard to the extra stock, the palm must be awarded in this class to Mr. John Wrigley's collection of bees. These bee-hives were a great point of attraction, and throughout the day by far the most interesting collection on the field to many visitors. Mr. Wrigley was literally besieged. The collection consisted of an observatory-hive, a bell-hive, a unicombe-hive, a cottage-hive, with a super containing 25 lbs. of honey, and a comb of last year's honey, containing 20 lbs. of the precious store. To those who have followed the recent newspaper controversy as to the habits of the bee it must have been especially interesting to watch the movements of the bees. For several hours a violent fratricidal war was carried on, and to the drones Wednesday was a day of merciless slaughter. Penned up in their hives as they believed for the winter, the little bees occupied themselves most gallantly in driving out their big brothers and uncles, twisting their wings, hunting them to the bottom of the hive, and there summarily dispatching them by a process of lynch law. The motive apparently prompting this measure was the instinct of self-preservation to protect themselves against starvation by the exhaustion of their honey before the return of spring with its flowers. No idle bee is ever tolerated within the hive. As soon as the slightest sickness or defect is discovered in a bee it is instantly hustled out of the hive, and left to die or recover, just as the case may be. The movements of the queen bee excited the liveliest interest and attention. She is the very arch-type of a constitutional sovereign—reigning without governing. Her subjects possess all the rights of a free people. They believe in the sacred right of rebellion; and when any especially gross act of regal tyranny has been perpetrated, when the sovereign prerogatives have been stretched beyond the constitutional point, not even the great English people can be readier than these little republicans to vindicate themselves against the royal authority. Not only are cases of deposition frequent, but occasionally the queen is put to the cruellest torture and death. Still, when all goes well, the bees are the most loyal and dutiful of subjects. They respect and reverence their queen to a degree which seems greatly out of character with their really high spirit of independence and self-assertion. We are assured by Mr. Wrigley that it is a gross libel on the bee to say, as the *Times* "Bee-master" says, that she is fond of a little beer. Bees may be tempted to indulge in fermented liquors, but—listen to this ye teetotallers!—both from principle and taste, they infinitely prefer a glass of clear cold water with a cinder and a few lumps of sugar."

CAUSING A SWARM TO SETTLE.—To prevent a swarm flying away, or to make one settle, take your longest-garden

syringe full of water, and give them a gentle shower with a very fine rose, not vindictively to half drown them, but to give them a hint that they had better look out for shelter. I tried it first some years ago, and it has always been successful.—E. M. W.

ANALYSIS OF THE EXCRETA OF BEES.

VARIOUS opinions are held respecting the composition of the excrement of bees. While most persons regard the contents of the rectum as composed of the indigestible remains of pollen, Dr. Alefield recently declared them to be uric acid. An analysis of the excreta has shown the following ingredients:—

1. *Remains of pollen.*—I boiled the excrement in caustic potash lye, slightly diluted. After filtering, I washed the residuum in hot dilute muriatic acid. What was left after again filtering, could, from its insolubility, be only the remains of pollen. It appears under the microscope like an indistinctly granular mass.

2. *Uric acid.*—I immersed the excrement in concentrated sulphuric acid, in which uric acid remains undecomposed. After carefully decanting the liquid from the resulting carbonaceous mass, I added water; and then washed the precipitated matter in water. I now added one drop of liquor ammoniac and one drop of muriatic acid. On heating, the mass assumed a purplish hue—the characteristic action of uric acid.

3. *Hippuric acid.*—I boiled some excrement in caustic potash lye. After filtering, I added dilute muriatic acid, and obtained a precipitate which proved to be composed of uric and hippuric acid.

According to an approximate estimate, the excreta of bees consists of about one-third uric and hippuric acid, and the rest of indigestible portions of pollen.—(*Canada Farmer*.)

VOLATILE SOAP FOR REMOVING PAINT, GREASE, SPOTS, &c.—Four tablespoonfuls of spirits of hartshorn, four tablespoonfuls of alcohol, and a tablespoonful of salt. Shake the whole well together in a bottle, and apply with a sponge or brush.—(*Scientific American*.)

OUR LETTER BOX.

DISINGUISHING GANDERS FROM GESE (B. H. W.).—It is very difficult to speak positively as to the sex of Geese, and therefore all sorts of expedients are resorted to—some trust to one, some to another. The gander is supposed to have a shorter and thicker neck. He is said to have the bag between the legs single, while the goose has it double. In adult birds the sex may be discovered by examination. Many people try them with a dog. If the birds are shut up in a small place like a pigsty, and a dog put in, the ganders will all lower their heads and bies at it.

BRABMA POOTRA CHARACTERISTICS (A. G.).—There are light and dark Brahmas. You should choose one or the other. In the dark variety the cock should have a black breast, thickly spotted with white; dark tail, light hackle and saddle, black, or nearly black, thighs. The pullets are pencilled all over, except the hackle, which is black and white striped. Vulture hocks are not desirable. (*Brahma Pootra*).—The vulture hocks are great defects, but not disqualifications. The crooked breasts are not important.

POULTRY EXHIBITIONS (An Exhibitor of Poultry).—We insert in our list gratuitously every forthcoming poultry show that the secretary announces to us; and we ask all such secretaries to send the announcements.

GOLDEN PHEASANTS (W. H. B.).—Golden Pheasants are not productive till they are two years old. It is after the same time the cocks get their plumage. Barley is the best food, but they are fond of and require green food. They must have clean water. They are very hardy and require little or no shelter. They may be allowed to run about in all weathers. If the house is not already covered, we advise you not to cover it. The birds do not require it, and any little gain by keeping out rain is more than counterbalanced by the loss of sun.

LONDON MARKETS.—OCTOBER 3.

POULTRY.

The principal feature in our market this week is the Goose trade for Michaelmas. It has been diminishing for years, but the trade has never been so bad as this time. It was difficult to find buyers at low prices. Michaelmas remains as quarter day, but it is forgotten so far as Goose-eating is concerned.

	s.	d.	s.	d.		s.	d.	s.	d.
Large Fowls	2	6	3	0	Grouse	3	6	3	0
Smaller do.....	2	0	3	3	Partridges	1	6	1	0
Chickens.....	1	6	1	0	Pheasants	0	8	0	0
Geese	5	0	7	0	Rabbits.....	1	4	1	5
Ducks	2	8	2	6	Wild do.	0	8	0	0

WEEKLY CALENDAR.

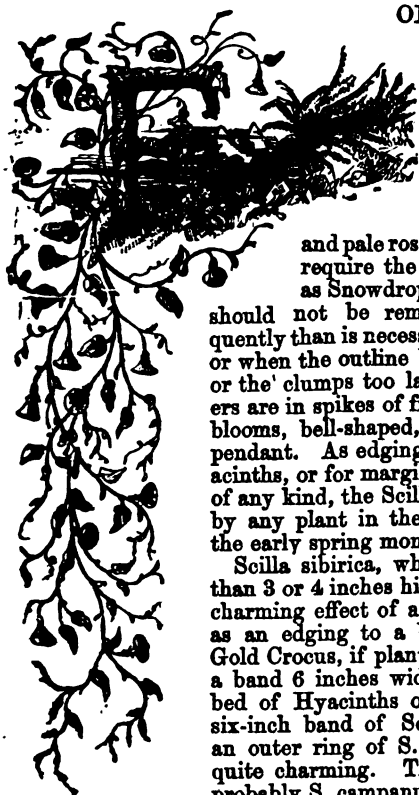
Day of Month.	Day of Week.	OCTOBER 11—17, 1864.	Average Temperature near London.			Rain in last 37 years.	Sun Rises.		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock after Sun.	Day of Year.
			Day.	Night.	Mean.		m.	h.	m.	h.	m.	h.	m.	h.			
11	Tu	Elm berries yellow.	61.9	42.9	52.4	20	20	af 6	14	af 5	13	3	8	1	11	13	265
12	W	Ash leaves fall.	60.5	42.3	51.4	21	21	6	13	5	41	3	28	2	12	13	266
13	Th	Soft Wheat Grass ripe.	60.4	42.5	51.5	19	23	6	10	5	8	4	50	3	13	13	267
14	F	Swallow last seen.	60.0	41.6	50.3	17	25	6	7	5	37	4	11	5	14	14	268
15	S	Lady Bird hibernates.	58.8	41.0	49.9	18	26	6	5	5	8	5	32	6	O	14	269
16	Sun	21 SUNDAY AFTER TRINITY.	58.7	40.2	49.4	16	28	6	3	8	44	5	52	7	16	14	290
17	M	Martins last seen.	58.3	41.3	49.7	16	30	6	1	5	25	6	8	9	17	14	291

From observations taken near London during the last thirty-seven years, the average day temperature of the week is 59.6°, and its night temperature 41.7°. The greatest heat was 74° on the 15th, 1842; and the lowest cold, 24°, on the 15th, 1860. The greatest fall of rain was 1.64 inch.

BULBS FOR FLOWER GARDEN DECORATION.

(Continued from page 270.)

SCILLA.



OR margins and edgings to beds and borders these are very pretty dwarf plants. The prevailing colour is blue, though there are some white

and pale rose varieties. They require the same treatment as Snowdrops, and like them should not be removed more frequently than is necessary for increase, or when the outline becomes broken, or the clumps too large. The flowers are in spikes of from six to twelve blooms, bell-shaped, and gracefully pendant. As edgings to beds of Hyacinths, or for marginal effect in beds of any kind, the Scillas are unrivalled by any plant in their colour during the early spring months.

Scilla sibirica, which is not more than 3 or 4 inches high, has the most charming effect of any plant I know as an edging to a bed of Cloth of Gold Crocus, if planted so as to form a band 6 inches wide; and round a bed of Hyacinths of red shades, a six-inch band of Scilla bifolia and an outer ring of S. bifolia alba are quite charming. The best white is probably S. campanulata alba, which is of free growth and a profuse

bloomer. S. patula, a porcelain blue, with a good spike, and free in habit and blooming; S. campanulata (syn. belgica cœrulea), fine blue; and S. amœna, bright blue with erect spike, are the best out of about eighteen. S. peruviana, blue, has large erect trusses; and there is a white variety of it. Scillas are admirably adapted for marginal effect in window-boxes and baskets when associated with other bulbs. They will grow in all soils, those which are rather light being preferable, and they require a light open situation.

ERYTHRONIUM.

The Erythronium, or Dog's-tooth Violet, has ornamental foliage distinct from that of any other bulb, and has a fine effect when planted as an edging to beds of Hyacinths, always considering the shades of colour, so that a pleasing arrangement may be made. They are easy of cultivation, but like a light dry soil containing plenty of vegetable matter, as leaf mould. They do best,

however, in peat soil. Dried bulbs should have a little sand placed round them at the time of planting, otherwise they are very apt to decay in consequence of the absorption of moisture, whilst the root is rendered all but farinaceous through drying them. They should be planted about 3 inches apart and at the same depth; and when once planted they should not be again removed until they have increased too much, or until the soil becomes impoverished, which may be known by the weakness of the foliage. The best time to transplant them is immediately after the foliage has decayed. They should be replanted the same day; the largest roots being used for immediate effect, whilst those of less size are put in more closely together in places of minor importance. Erythronium americanum has yellow flowers, and is fine. Erythronium dens-canis and its variety major have purplish blooms; and the variety alba and its sub-variety major have white blossoms. The leaves are occasionally employed for decorative purposes, the bulbs being in that case potted and forced like Hyacinths.

HYACINTHS.

These are unrivalled (and so are all plants for some particular purpose if we only knew it), for producing effect either in beds of one colour, or in marginal lines, balcony-boxes, and ornamental designs, associated with other bulbs or in masses by themselves. The grand secret in forming beds of them is to plant in a line, ring, or bed of one colour, and one variety only, so that the drawback of "mixtures"—that is, different heights, colours, and periods of blooming—may be avoided, the aim being to obtain a bed or border of equal height, and with each colour appearing simultaneously. Mixtures, however, answer perfectly for borders and mixed beds, though not admissible except as neutrals in an arrangement of beds where an equal and uniform effect is desired. Bulbs of this description may be had at a cheap rate, and though not equal to those sold for growing in pots and for forcing, they make a splendid show in April. The colours are white, blue, red, and yellow in different shades. The Hyacinths usually employed for bedding are the second-sized bulbs, or such as have some disqualification for being grown in pots—as loss of name, commonness of sort, this being old, perhaps; yet they may be good sound bulbs, and calculated to make a fine show.

Miniature Hyacinths are nothing more nor less than matured small roots of named Hyacinths, which bloom finely for their size, and are therefore admirably adapted for small groups, edgings to beds or borders, baskets, or window-sill boxes or frames.

When the beds are cleared of their summer occupants it is time to prepare them for planting bulbs to bloom in April, May, and the beginning of June. Nothing is better than deep digging or trenching, placing at the bottom of each bed 6 inches of fresh or recently fallen tree leaves, which should be covered with a foot of soil; and they will serve to raise the beds considerably, and allow water to drain away freely. In the course of a

year the leaves will be pretty well decomposed, and on digging in the succeeding autumn they will be brought to the surface, and thus the soil will be enriched by a not-over-stimulating manure. Fresh leaves being put in every autumn, the beds annually receive a dressing of vegetable matter, which saves dung; and in dry summers especially the roots lay hold of the decomposing leaves, when the plants are becoming exhausted by blooming. No one thinks of thinning the bloom of bedding plants, and the consequence is that in summers like the past they bloom themselves to death. The beds being thus prepared, if the soil is free I simply plant the bulbs from 4 to 6 inches apart in lines, double rows being more effective than single, allowing the same distance between the two lines, and 1 foot between each pair of double rows. If in beds, 6 inches from bulb to bulb is a fair allowance. Insert the bulbs 3 inches below the surface; and if the soil is wet place a little dry sand around each, but on light soils this is unnecessary; then rake the surface and make it neat. The beds should slope from the centre to the sides, and the borders from the back to the front.

The bulbs should be planted from the beginning of October to the beginning of December, the middle of November being a suitable time. It is very desirable to plant in dry weather, for unless the ground is in good working order the bulbs are almost certain to become unsound, especially if kept in a very dry place previous to planting. About the middle of December the surface of the beds should be covered with an inch or two of partially decayed leaves, which serve as a protection against frost, keep the beds from becoming saturated with rain, and afford nourishment to the roots. By spring the leaves will be thoroughly decomposed by the action of the air, and be in a suitable state for being dug into the beds preparatory for bedding-out plants.

NARCISSUS.

Those known as Polyanthus Narcissus are as well adapted for planting out of doors as for pot culture, and a bed of them is at least novel and fragrant. They require precisely the same treatment as Hyacinths.

Garden Narcissus, as the Hooped Petticoat, Trumpet, Pheasant's-eye, and other varieties are usually styled, are admirably adapted for borders, and a bed or two may be desirable. The roots should be planted from the middle of October to the middle of November, but the earlier the better. Plant them about 3 inches apart, and the same depth, in ground stirred deeply, and in good heart. Planted in borders in clumps of from six to twelve bulbs they look well, and the flowers are very desirable for bouquets in spring.

Once planted it is not necessary to remove them oftener than once in three years, and then the bulbs should be put in as soon as the ground can be prepared for them, always renewing the soil if they are planted in the same place. It is not uncommon to see these roots left for years without any care whatever, and as they increase fast the clumps become large, and are poor in consequence. On taking them up it would be well to consider whether it may not be desirable to plant the smaller bulbs in woods near the outside, by woodland walks, in the front of shrubberies, or in parks. The most suitable time to remove them is when the foliage decays.

The double white Narcissus is remarkable for its delicious odour; and the charming *N. bicolor* with white sepals, and funnel of yellow, is distinct and fine when it can be had true to name. The Trumpet Narcissus (*N. maximus*) is also fine; and the Sulphur Trumpet (*N. moschatos*) desirable. Pheasant's-eye (*N. poeticus*), pure white, with its cup variegated with red, will be in every garden; *N. bulbocodium* (Hooped Petticoat), is rich and effective; *N. incomparabilis flore pleno* or Nonpareil, Silver Phoenix, bicolorata or Orange Phoenix, not excepting bifrons, with its Jonquil-like flowers, and the Jonquils are all fine, but must yield to the glorious *N. pseudo-Narcissus*, or single Daffodil of our woods, and the Van Sion, or double.

TULIPS.

Probably no flower is so worthy of extensive cultivation for the ornamentation of the flower garden as the early single Tulips. They are very numerous, and many of them

are of little value for planting in masses, but having grown a number of them I can vouch for those named below being good bedders.

YELLOW.

Canary Bird, rich pure yellow, attaining a height of about 9 inches.
Pottelbakker Yellow, yellow self, of good form, and effective; 9 to 12 inches.
Duc Van Thol, yellow, early, and very dwarf; 4 to 6 inches.
Yellow Prince, a good yellow, about 9 inches.
Thomas Moore, orange, distinct; 9 inches.

WHITES.

Pottelbakker White; 9 to 12 inches. Surpassed by none.
Luna. A neat flower and very effective.
Queen Victoria, fine form, but small; 9 inches.
Jagt Van Delft, white self, fine form; 9 inches.
La Laitière, white, heightened by an outer blue tint; fine; 9 inches.

SCARLET SHADES.

Typhon, crimson scarlet, rather small, but effective; 9 inches.
Duc Van Thol, scarlet, very beautiful; 6 inches.
Cramoisi fidèle, intense scarlet.
Couleur Cramoisi, crimson scarlet, small, but fine.
Vermillon Brillant, the best of the scarlets; 6 to 9 inches.
La Belle Alliance, rich crimson scarlet; 6 to 9 inches.

BLUE SHADES.

Florida, purplish violet, fine; 9 inches.
Berangaria, a purple with a little mauve in it. Very fine.
Archus, violet purple, lilac belt; 9 inches.
Calman, violet or puce, with lilac margin.
La Plaisante, violet, with a slight rosy tint.
Wouwerman, violet purple; fine.

FEATHERED, STRIPED, AND TINTED IN VARIOUS SHADES.

Duc Van Thol, red with orange border, early; 4 to 6 inches.
Keizerkroon, yellow ground, flaked vivid scarlet. Queen of the early Tulips.
Royal Standard or Standard Royal, white ground, flaked with carmine.
Alida Marie, white, tipped and flaked with cerise; extra fine.
Bride of Haarlem, white bordered with crimson.
Rosa Mundi, white, shaded rose; fine.
Grand Duc, yellow and crimson.
Rose Luisante, rosy crimson, peach edges.
Duc Major, rich red, margined orange yellow; 6 to 9 inches.
Rose Tendre, white, feathered and striped crimson.
Roi Pepin, white, striped or rather flaked with crimson. A new kind, and a great improvement.
Ma Fils Aimable, a brassy red flaked with orange; 6 to 9 inches.
Standard of Gold, yellow, crimson tip; very gay.

DOUBLE TULIPS.

Tournecel, scarlet and yellow. The most effective Tulip in cultivation. 9 inches.
Yellow Rose, yellow. The best yellow bedding Tulip. 9 inches. There is a variety of this with variegated leaves.
La Candeur, white. The best of all whites. 9 inches.
Rex Rubrorum, crimson scarlet. The best of the reds. 9 inches.
Imperator Rubrorum, crimson scarlet; gay; 9 inches.
Paeony Gold, golden yellow feathered with crimson; 6 to 9 inches.
Couronne Pourpre, rich crimson; very effective; 9 inches.
Mariage de ma Fille, white, striped violet rose; 1 foot.
Overwinnaar, white, barred and feathered violet purple; 6 to 9 inches.
Gloria Solis, crimson with yellow border; 6 inches.
Duc Van Thol, red and yellow; 6 inches.

There are in addition to these the Parrot Tulips, which have flowers of large size and brilliant colours, forming most effective groups in borders. Of these, Perfecta, scarlet and yellow; Constantinople, red; Feu Brillant, scarlet; Coffee Colour; Belle Jaune, yellow; and Monstre Rouge, crimson, are amongst the best.

Then there are late or rather show Tulips, which are not the fashion just now, but if ever a sight is worth seeing it is a bed of these under canvases on a bright day in early summer; but knowing little about Feathered Bizarres, Flamed Bizarres, Feathered Byblomens, Flamed Byblomens, Feathered Roses, Flamed Roses, and Selfs, I shall leave them to be disposed of by those more initiated in such matters.

Tulips like a deep rich soil, light rather than strong; but any kind will answer if free of stagnant water, and stirred to a depth of a foot or 18 inches. If very light a dressing of cool manure, as sheep or cowdung about a year old, spread an inch thick on the surface, and pointed in, will contribute to their vigour; but if the soil is very tenacious and heavy, the same thickness of sharp sand would be preferable. By all means plant in dry weather, placing the bulbs 6 inches asunder every way, but the smaller kinds, as the Duc Van Thols, should not be more than 3 or 4 inches apart, planting them so that the apex of each may be covered 2 inches in wet soils, and 8 inches in those which are dry and loose; a covering of light mould, especially if the soil is heavy and wet, is conducive to success. Although Tulips will grow and flower if stuck into the soil in almost any way, yet they annually become weaker in growth, and fewer in number, until they at last disappear. Once planted they require no further

protection until the blooming is past, when they may be taken up with balls, if the foliage is fresh, and planted again in a similar situation, placing them the same depth in the soil, giving a good watering, and shading from hot sun for three or four days, after which remove the shading, and discontinue watering, when they will ripen their growth, and be little the worse of the removal. In most seasons, however, the foliage will be so far advanced as to allow of their being taken up by the first week in June, it being injurious to the roots to allow them to remain in the soil after the foliage exhibits a yellow hue. The bulbs should not be allowed to remain long in the ground after flowering, but should be taken up and dried before the foliage is quite gone. The most suitable time to plant is the first fortnight in November, and they may be planted up to January, but the later they are put in the later will be the bloom in the spring, and as this interferes with the planting of the summer occupants of the beds, early planting is advisable.

(To be continued).

G. ABBEY.

MY ORCHARD-HOUSE.—No. 11.

THE season of the year is at hand for remodelling our orchard-houses; for replacing such trees as, from any cause, we do not wish to retain; for classifying varieties, and adapting them to those portions of the house which their habits seem to require; and for removing such sorts as, after having been tested and found naturally free-growing and prolific, we may desire in future to grow on some warm wall.

About this latter portion of the subject I shall have a few suggestions to offer to my brother amateurs, chiefly because it constitutes my best experience. It is now about ten years since, having carefully studied the cordon system on the continent under Dubreuil, and tried it on the open wall in various ways, I adapted it, with the important modification of the summer pruning-in of the shoots, to the exigencies of the orchard-house. After some years' further trial the system (chiefly represented by diagonal cordons), being successful, the results were published in 1860 in a small work. Since that period in a certain number of orchard-houses in this island and in England the system has been adopted for the back walls. Among these none have been so successfully worked as the well-built house at Grange Lodge, in this island, under the able management of Mr. Pethers. On the diagonal cordons of the back wall this season were grown some of the very finest possible fruit. Two other houses on this plan in the island show remarkable signs of fruit for next year. But this is not the place to allude to this matter further than as far as it bears on the point mentioned above—namely, the removal of trees to the open wall, which, I contend, is greatly facilitated by the adoption of these flat diagonal cordons.

Readers of this journal may remember a part of the orchard-house controversy, where one excellent authority predicts the universal adoption of the system for Pears. I have myself no doubt on this subject, having for ten years very successfully grown Peaches, Pears, Plums, Cherries, and Apples side by side in this way, as is well known. Nay, I believe that the very choicest fruit can best be grown in this fashion. I should suggest, then, to my brother amateurs that, if they wish to thin out their stock of trees in their houses, planting them out against a good warm wall would be easy in this way. If they had cordon trees trained as mine are, diagonally, at intervals of 3 feet against the back wall, nothing would be easier than to plant them against an open south wall in the same fashion. Care only would be required that foreright shoots, which in-doors bear well away from the wall, should not be allowed to grow too far out, if in the open air, simply because they thus lose the warmth of the wall. A skilful gardener, however, would avoid this error; and I have seen this year two thousand Peaches grown in a friend's garden on trees trained in a similar manner. As to other fruits, especially Pears, they bear wonderfully as diagonal cordons. On one of our south walls (about 12 feet high), are seen Plums, Cherries, and Pears growing side by side. We can begin our wall with a May Cherry, and end it with a winter Pear. Apples of the best kinds are splendid in this fashion, though not equal to

those grown in an orchard-house. This year in these islands Apples have done well under glass. But to return to the point. I mean that any one desirous of thinning out his orchard-house would be best enabled to do so if he grew his trees in this shape, so that if he chose they might be removed to the open wall, for it is evident that a bush tree is unfit to be planted against a wall. It requires to be cut down and much altered, besides losing a year's fruit. Some trees there are which do better; but generally, if the tree be a fine open bush, well-rounded and equal, as it should be, it is then very ill adapted for a wall tree.

The next best shape to the flat diagonal is the vertical cordon, which shape is common enough in nurseries now. By cutting away one side of this vertical tree it can be adapted for a wall. If so, plant it as a diagonal cordon at an angle of 45°, if in a bearing state, free growing, and healthy; but if exhausted by bearing, or weak, or a maiden tree, then plant it at an angle of 75° till it lay hold of the soil, and begin to thrive; then lower it to 45°. It thus assumes the natural angle of most branches; Nature points this out, and experience demonstrates that this angle is the most proper to produce fruit. A vertical branch is apt to grow too strongly, and the sap to accumulate at the upper portions, leaving the lower ones gradually bare. If brought down to the horizontal line the vertical shoots will absorb the sap, and become unduly strong, while the extremities of the leaders will dwindle away.

I confess to being quite a bigot in favour of these diagonal cordon trees. They are easy to manage, do not grow rampantly as some think, they cover the wall very soon, you can have a great variety of sorts, they come sooner into bearing, any particular tree is easy to protect, being grown in such a small space they require no lifting, nor root! pruning; even in the house, as far as I can see, if dissatisfied with the tree it is easy to remove it, and there is no unpleasant blank space left on your best walls for years; and as to fertility, there is nothing to compare with it, space for space. Any further suggestions required I shall be happy to communicate; but it seems simple enough.

At present few Peaches remain in the house, only three sorts in all; but this is an error to be remedied. Thomas's Late, an American, is only about 8 inches round as yet, and colouring well. It is a delicious late Peach, in shape like Early York, and well worthy of trial in lean-to houses against the wall. The next to ripen, at the end of the month, will be Tardive d'Espagne. This Peach it is very difficult to ripen well in the south unless the season be favourable. When thoroughly well grown in the house it looks like a waxen Peach, and is continually taken for such if exhibited. This is one of the triumphs of the house. These yellow Peaches, though not so valuable for the market, if early (so the dealers say), when late become then very useful. For dessert they are very fine, their colour by contrast with other fruits makes them very telling. Baldwin's Late, is only half grown at present. Being in a pot, and not in a very good place, it has not a good chance to colour well. There are seven Peaches on the bush, and these are not to be ripe till November. By that time most of the leaves of the other trees will be fallen. These three varieties are good sorts. Out of doors they would be simply ridiculous failures.

We have planted early Potatoes between the potted trees, and in the spare borders. Not requiring the house for wintering anything, nor for Chrysanthemums, nor finding anything, except early Potatoes and Strawberries, worth the trouble of growing, we have always planted Potatoes in this way—not that it adds to the beauty of the house in winter; quite the contrary, but these are valuable things to produce.

As to the sorts planted. Early Handsworth is really a very good sort for these houses or for frames; it is large, and can thus be dug up comparatively early, and the haulm is naturally short, which is a very valuable quality for Potatoes under glass. Planted on the 1st of October, we dug up some weighing six to the pound, which were ready by the 25th of March, and realised 15d. per pound then. Carter's Early Champion Kidneys are also a good sort to plant, because early Kidney Potatoes always realise more when sold for some reason or other. We have this year planted both sorts, and also some French varieties common here. It is best, however, not to look too long at our houses

from the money-point of view. A comparison of all our garden books would be very amusing, not to say instructive.—T. COLLINGS BRÉHAUT, *Richmond House, Guernsey.*

TRITOMA UVARIA.

RESPONDING to Mr. Robson's request in the last issue of your Journal, I beg to state that *Tritoma uvaria*, though always exceedingly fine, was never so magnificent as this season in East Lothian. We have here several long back lines of it, which have been truly magnificent for a long time, and still continue so. It presents no signs of degeneracy, but the reverse, and most certainly we have no hardy herbaceous plant that can compete with it from the beginning of September till the middle of October. After the latter date *T. grandis* takes its place, and flowers in great beauty up till Christmas; so that by planting the two kinds plant for plant in the rows, the flowering season of the *Tritoma* can be extended for four months. *Grandis* is much more vigorous, and throws up its flower-stems much higher than *uvaria*.

They are here moulded up before severe frost sets in like a row of Potatoes, and we never lose a plant; and when the flower borders, to which they form a backing, are dug or trenched, a quantity of leaf mould is worked in near the roots of the *Tritoma*, and in this way it thrives amazingly. The soil is a very dry, deep sandy loam, and this is one of the driest districts in Great Britain, so that it cannot be superabundant moisture that makes it thrive here. Like most other flower-garden plants, it requires liberal treatment. Long may it be ere we have to lament the loss or degeneracy of so noble a plant.—D. THOMSON, *Archerfield.*

VISITS TO GARDENS PUBLIC AND PRIVATE.

MESSRS. FRANCIS AND ARTHUR DICKSON & SONS,
CHESTER.

ON my return from a mournful journey to Ireland, such a journey as one can take but once in a lifetime, I found myself one morning in the ancient and loyal city of Chester. Many, many years ago I had passed through it ere railways ran, and when the journey from London to Dublin occupied some two or three days instead of eleven hours as now; but so peculiar is the character of the city, and so vivid are the impressions that are made in early days, that it seemed all quite familiar ground, and but as if the other day that I had seen it. Having a few hours in the morning to spare before the train for London started, and having those with me who were like myself interested in such matters, instead of lionising the town we determined on visiting the nurseries of the Messrs. Dickson, about which we had heard a good deal, and of which the good people of Chester seemed to be not a little proud as a good specimen of a provincial establishment; and the extent of the grounds and the order and neatness that prevailed throughout fully justified them in the opinion they had formed.

These nurseries are situated at Upton, about a mile and a half from the city, and are in an elevated position, exposed to a good deal of rough weather, so that plants obtained from thence and removed to more sheltered districts would be likely to thrive very well; for it is a great point to have such trees and shrubs as have been used to a rougher climate than that in which they are permanently to abide, while the reverse is oftentimes injurious to the well-being of the plants, such as have been reared and nurtured in sheltered and warm districts being very apt to suffer on their removal to colder ones. There are upwards of 130 acres comprised within the limits of the ground, the soil about one-half good retentive loam, the other half light sandy soil; and although this might seem unsuitable to many other things which are grown, yet by judicious management everything is in a healthy and vigorous condition. There is a long range of houses containing the usual varied stock of a general nursery in both stove and greenhouse plants. I have never seen, for instance, a healthier and, for its size, a finer stock of Azaleas than those which are grown here. No symptoms of thrips could I see on any of the plants; and many of them were of that attractive style

known as half-specimens naturally grown, and all well set with bloom-buds. The outside wall of these houses is planted with *Berberis Darwinii*, which is one of the prettiest of our shrubs, always fresh and green, and when in flower presenting a perfect mass of beautiful apricot-coloured racemes, and pretty also in fruiting time, with its large plum-coloured berries. In front of the houses there is a long narrow strip laid out somewhat in Nesfield's style of gardening. Coloured panels, however, are not used, white being the only covering of the walks, the bright colouring of the flowers being regarded as sufficient for the purpose. Amongst the many combinations here, I think that a bed, the centre of which was composed of *Centaurea candidissima*, and the edge *Amaranthus melancholicus ruber*, was one of the most effective. This plant has not, however, succeeded very well so far north, the climate seems too cold for it. *Gazania splendens* makes a fine autumn bed, and at that season of the year seems here to remain open in the sunshine instead of closing up as it does in the summer. On one of the walls I noticed a fine plant of *Clematis lanuginosa* in good flower; as also *C. lanuginosa candida*, a pale nearly white flower, which will contrast well with those new ones of Messrs. Jackson of Woking, so rich and brilliant in their colouring.

As Roses are now so much in vogue, and have become everybody's flower, and as persons will not now care to buy inferior sorts, the Messrs. Dickson have devoted a large space to their culture. As fine and healthy a selection of Roses in pots as I have ever seen, numbering 20,000, and a large portion of those on their own roots, afford a tempting selection to the Rose-growers of Cheshire, and indeed of other parts too; while from thirty to forty thousand standards in the ground are also such as an amateur would well like to select from. A new rosarium in a sheltered position has also been lately planted, and in it I observed in bloom many of the best and finest varieties of Hybrid Perpetual, Bourbon, and Tea Roses. Charles Lefebvre to its other charms seems to have added this of its being very free-flowering in autumn. *Géant des Batailles*, *Celine Forestier*, *Maréchal Vaillant*, and others were also displaying their beauties, and the vigour of their foliage seemed to indicate that they were well contented with their situation. I was told that the Messrs. Dickson had more than once been exhibitors at the shows of the Royal Horticultural Society of Dublin, and that they had been successful.

Conifers seem also to thrive here remarkably well, although we are sometimes apt to associate them with the peaty soil of Surrey; but nothing could be healthier than those here cultivated. There was one specimen of *Araucaria imbricata*, the most beautiful and unique that I have ever seen; for there are evidently several varieties of this noble tree, this having a far more drooping and graceful habit than any that I have seen, while the foliage was large and vigorous. *Wellingtonia* seemed also quite at home, a fine tree eight years old being upwards of 12 feet high, and with a very large stem. Then there were nice specimens of *Thuja compacta*, *Japonica*, *Lobbiana*; *Picea amabilis*, *P. Nordmanniana*, &c. *Rhododendrons* were also in good health.

The portion of the ground allotted to fruit trees is very large; and everything here, as may be supposed, is done on a very large scale. Thus, for example, there were seed-beds of the common Laurel which contained upwards of 12,000,000 plants, this being arrived at by taking a square foot, counting the number of seedlings in it, and multiplying the whole space by that. Nor have I seen anywhere more vigorous Vines in pots than there are here. Again I must ask, What becomes of them all? It can only be, I think, that they are grown for a season in pots by purchasers, and then killed by injudicious management. I know of no other way to account for the immense quantities that are everywhere grown, and for which there ever seems to be an increasing demand.

Perhaps one of the prettiest things in the whole grounds was a ribbon-border of Hollies, which when completed will be a quarter of a mile in length. The edge of the border is composed of two rows of Box; then some variegated Ives are pegged down; and then five rows of Hollies, first yellow variegated, then white ditto, then yellow, then white, while the background is composed of the more ornamental species of green Hollies. I cannot conceive that anything in its way can exceed this when the whole mass has been filled in,

while it will have the great advantage of being always bright and clean. As forming part of ornamental grounds it is well worthy of imitation by those whose tastes are not circumscribed by the extent of their grounds or the depth of their purses; and I should be glad to see this same border in a few years' time, when it has filled in, as I believe it will.

Amongst minor matters I noticed a very excellent contrivance for vases. It is well known that stone vases are very expensive, and iron ones are not so seemly; but here the plan is adopted of converting iron into stone—that is, the iron vases are painted a light stone colour, and when wet are dredged all over with sand. This adhering to the wet paint gives the exact appearance of stone, and can be of course easily renewed from time to time.

It will be seen that these nurseries fully deserve the character they have obtained of being amongst the most extensive and best arranged of our great provincial establishments. There was great order and neatness arrived at throughout, and this is not an easy matter in such an establishment; but it certainly enhances very much the appearance of the grounds. The morning on which I saw them was bright and clear after the bounteous rains of the past few weeks; and I came away most favourably impressed with the entire management and stock of this extensive concern. I should add that at the shop in Eastgate Street there was a very fine selection of the best and most sought for Dutch bulbs of all kinds, a worthy appendage to the Upton grounds.—*D., Deal.*

COTTAGES, AND HOW TO TENANT THEM.

SOME friends have kindly told me that I was rather hard on the proprietors of cottage property who had taken little thought about a water supply, and have brought forward instances with which I was well acquainted previously of unsatisfactory investments in cottage property, and the next to impossibility of keeping these cottages, when let at a very cheap rent, even in a healthy condition from overcrowding, and the want of all refined habits in the inmates. I have been told of instances where proprietors had spent a lifetime in endeavouring to give a cheerful aspect and a high moral tone to villagers on their estates; and that they failed in all their attempts because the people would either crowd their houses by taking people to live with them, or when a son and a daughter at a very early age—but in the painful circumstances none too early—thought proper to marry, without anything to commence housekeeping with, they received an asylum with one of the parents, and thus two or three families were crowded together into a place only suitable for one, with all the consequent attendants of pestilence and fever, increase of poor rates, pauperism, &c.; and the question is put, What would you do under such circumstances?

Well, in the first place, if a gentleman had a number of cottages so bad as to be unfit to live in comfortably, and there could in general seasons be no water supply for the promotion of cleanliness, it would be best to give the occupants due notice, and either correct what was amiss or pull the cottages down.

Secondly. If a gentleman, as most gentlemen do, let nice cottages at a lower rent than mere contractors, one specification as to overcrowding should be rigidly enforced, and no families, or even lodgers, allowed to live there without the knowledge and permission of the proprietor or his agent. If this is not done I know what the consequence will be. Where no refined or high moral feeling exists, a house that might do for a man and his wife, and perhaps four children, will soon be made to hold as it can some ten or a dozen, and of different sexes, and anything like morals and decency be swept away. The very knowledge of such supervision will be a great help to refinement and morals.

Thirdly. In all such cases monthly tenancies, or at least monthly notices, are of great value; and if the breaking of the conditions be followed with a few cases of expulsion, these will be of great benefit. It is within my knowledge, that in cases where every convenience for decency and cleanliness was given, the tenants would persist in having a dunghill and a slop-hole close to their dwelling instead of at the farthest part of their gardens, careless how they produced the seeds

of fever and pestilence in themselves and others. It is a great blessing that the law will not permit a man to poison himself with malaria, or be the means of polluting the atmosphere of his neighbours; but the most effectual law with all such people when admonition and repeated warnings are of no avail, is simply the notice that they must quit their quarters. A few instances of this kind in a neighbourhood will do a vast amount of good.

Fourth. Though I am anything but a Malthusian, I have a strong impression that in many agricultural districts lads and lasses marry too young; and I consider that they always do so when they have nothing between them to commence housekeeping with. As for true love in such cases, it is all a chimera. If a young man loved a woman he would never ask her to join her fate with his until he could place her in a cottage at least ordinarily supplied with the necessaries of comfort and decency. I shall never forget going into the cottage of a newly married pair, both very young, and seeing a few rough boards in a corner for a bed, a board with four round spreading sticks stuck in as legs for a table, a couple of large stones and a board between them for a seat, and a pot to answer all culinary purposes. This might be an extreme case, and was; but how many young couples commence life with taking on their first month's housekeeping, and trying to pay the old as they take on the new? Now, were I a squire, or a gentleman, or nobleman, and felt a little pride in my cottages, I would allow no young couple to take possession of them without showing me that they could furnish them respectably by their own honest earnings and savings. The gentleman who will condescend to do this, or insists on his agent doing it, will take one sure step towards securing good, well-behaved, moral tenants—a step which will be more productive of good than lots of mere routine visitations once or twice a-year, or ever so many sermons on cleanliness or propriety, however earnest and rightminded the clergyman or the minister may be.

What gentleman would think of letting a farm to a man merely because he was the highest bidder, if it were well known that he had no effects and not a pound at his banker's? And yet gentlemen complain of the unthrift, the untidiness, the want of decency, and absence of moral feeling too perceptible among a few of their cottage tenantry, notwithstanding all necessary arrangements to the contrary, though they give some of their best cottages unhesitatingly to young couples who between them can scarcely defray the expenses of the marriage feast and marriage ceremony, and commence their united career in debt to the butcher, baker, and grocer, and even to the cabinet-maker for the stool on which they sit and the bed on which they rest—a debt that too often clings like a millstone round their necks, paralysing all the energies of a life. Proverbs are fine things in their way, often the concentrated wisdom of ages; "Marry for love and work for money," however, has ruined thousands. The landlord who would feel a satisfaction not only in having healthy commodious cottages on his demesne, but in having them occupied by industrious, moral, well-conducted families, will exercise the truest benevolence in ascertaining that the young aspirants for tenancy have been well-conducted, and acted on the obverse of the proverb, and worked for money before they married for love. Ah! when scarcity and want stalk in by the door, and ugly wretchedness looks in at the window, love, happiness, and industry are apt to go out by the chimney. Some people that will be reached by nothing else than their own self-interest must have that appealed to; and the scrutiny I propose would tell on the best interests of all connected, and by means of example exert a general beneficial influence. With every desire that charity may perform its perfect work, it requires no seer's vision to perceive that many of our social evils in the country as respects the working classes, are owing to an undue patronising of the necessarily-ever-needy, because the inconsiderate, the unsteady, and the unthrift. Though not so pleasant, it would be well to try the other course.—*R. FISH.*

ORCHIDACEOUS PLANTS.—The ninth Part, just published, of "Select Orchidaceous Plants," edited by Mr. Warner and Mr. Williams, fully equals its predecessors in useful informa-

tion and beauty of illustration. The four Orchids described and portraited are *Anguloa Clowesii*, *Chysis Limminghii*, *Cælogyne cristata*, and *Disa grandiflora superba*. The portrait of the last-named is one of the most successful we know, and does justice to this splendid flower; for, as the authors truly say, "*Disa grandiflora superba* ranks among the finest of greenhouse Orchids." They add, "Our drawing was taken from a very strong plant that produced with us eight blooms on one spike—an unusual number, for commonly not more than two, three, or four are produced. It was grown in a greenhouse under Vines, but as near the glass as possible, where it obtained plenty of light."

ERECTING AN ORCHARD-HOUSE.

I HAVE been particularly interested with the communications in the Journal on orchard-houses, their management, &c., and purpose building one, dimensions not yet determined on; but before commencing to build, would you give me your advice on one or two matters? First. Let me tell you I shall have to manage it myself, I cannot afford to employ a man regularly. You will understand from this economy is a great consideration. As to the description of house—is Sir Joseph Paxton's method of building greenhouses a patent? Should I be infringing his rights, or lay myself open to any pains or penalties, if I bought wood and employed a country carpenter to work it up on his (Sir Joseph's) principle?

Which is the better plan—to grow Peaches and Nectarines, &c., in pots, or to plant them out? If grown in pots would soil to the depth of 2 or 3 feet require removing, and a certain amount of rubble put in, and what thickness? If this turning out of soil and bringing the rubble could be dispensed with, I think it would save a great expense. If grown in pots would the trees require repotting every year, or how often, and how many years do you suppose a tree could be grown in a pot? Will the trees produce as much or more fruit when grown in pots as when planted out, or *vice versa*? and why do people always write and talk of growing trees in pots—is there some great advantage in it? Nearly all the articles in your Journal and your little manual on greenhouses, speak of this method as if planting-out was not to be thought of.—TRENT.

[We do not take the responsibility of determining what is, and what is not a patent; but we feel pretty certain that if resolved to adopt Sir Joseph Paxton's method of houses for the million, a village blacksmith cannot make them up so economically as they are advertised, as all the work is cut by machinery, and put together by men used to it. If economy is your object, and the place is your own, a fixed roof will be the cheapest and best. In Sir Joseph's system, to which you refer, sashes are made in the usual way; but there is a raised cap between every two sashes some 8 to 12 inches wide, glazed, and this by means of a lever is raised to its full width, or for as little as half an inch. By means of nuts the lever might raise a third, a half, or the whole of the length of this ventilating cap.

We would rather you decided yourself as to whether you would grow in pots, or plant out the trees. You will find the matter temperately stated in "Doings of the Last Week," and in a late short article by "E. F." Both systems have their advantages and disadvantages. The pot system enables you to have more variety in little room, gives you more command over the size of your plants, and enables you to do all the root-pruning required very easily, and will give you good fruit if you thin sufficiently; but the plants will require much more attention, and especially in the way of watering. The fruit may be as numerous as you like, but unless well thinned they will not be so fine as from trees planted out. On the other hand, trees planted out are apt to grow too luxuriant, and will demand root-pruning as well as frequent pinching of the shoots, but you will be more independent of the water pail and continued attention. In your case, absent during the day, and with little help, if great variety were not your object, your simplest and best plan would be to plant the trees and train to a trellis 15 inches from the glass, and cultivate temporary plants in pots until the permanent trees filled the house, and then if you give air early in the morning the trees would pretty well look after them-

selves. The pot system must have labour and frequent waterings.

If you decide on pots, you have no occasion to have a rubble-bottomed border. A little fresh soil beneath the bottom of the pots will be quite sufficient, and half or three-parts plunging the pots will be advisable, chiefly for saving watering and keeping the roots in a more equable condition as respects temperature.

If grown in pots, and the pots are from 15 inches and larger in diameter, the trees will do well for several years in the same pots with the help of fresh top-dressings every year. We have seen trees in 20-inch pots that had borne well for ten years, and showed no signs of falling off. Smaller-sized pots would be better to be shifted, and that should be done as soon as the fruit is gathered. For instance: a small tree in a ten-inch pot should get one from 12 to 15 inches in diameter.

If you tell us what sort of house you resolve on, and what is the mode of growth you decide upon, and want more definite information, we shall be glad to help to the utmost of our ability, as we fully sympathise with all circumstances like yourself. We must not forget that one charm of the pot system is that the trees will afford you nice exercise in pinching and watering night and morning. If you would rather escape these pleasures, then plant out and train to a trellis.]

WHITE PERPETUAL ROSES.

THE request of a correspondent (J. Broughton), to know what are the best white and light-coloured varieties of Hybrid Perpetual Roses of the present and past few years, induces me to say a word on the point. There is no doubt that this is a direction in which the skill and energies of hybridisers ought to be exerted, for it is a class in which we are very deficient. There are times when Madame Vidot and Mrs. Rivers, especially the latter, appear nearly white, and then they are most beautiful; but why have we had nothing approaching that style for some years? The run has been all on the crimsons and roses, and even the latter have been comparatively little thought of when darker and brighter flowers were to be had; and however much we may admire the bright and gorgeous colouring of this style of flower, we still want something of a lighter character for contrast, and hence are obliged to go to the Teas and Noisettes for them; indeed, those white flowers which have been produced during the past few years can hardly be called Hybrid Perpetuals, the character of their growth and style of flower alike proclaim them to be Hybrid Noisettes. The best of them, however, I still conceive to be Mdlle. Bonnaire and Virginal; but perhaps I shall best satisfy your correspondent's wishes by giving descriptions of each of them as they occur to me.

Mademoiselle Bonnaire (1861).—Pale flesh, nearly white, and in bud most exquisite. One of the prettiest of the class. Wood very green and thorny. A good grower, though not robust.

Virginal (1860).—Very similar to the above, although, perhaps, not quite so full, and more white—i.e., with less of the flesh tint in it; flowers of a fair size. Blooms exhibited by Messrs. Paul & Son and Mr. Keynes might be even called large.

Louise Darrins (1862).—Quite white, but small. Habit of plant very dwarf, and altogether with very much of the Noisette character in it. Blooms profusely.

Mademoiselle Eugénie Verdier (1861).—Nearly white, with pale flesh centre in the style of Virginal. I have seen some very beautiful blooms of it. The habit of the plant is moderately vigorous.

Madame Alfred de Rougemont (1863).—This I saw exhibited very well early in this year. It is not a pure white, but slightly shaded with rose; may prove an acquisition.

Madame Freeman (1863).—Pale flesh, changing to white. I have not seen enough of this, but it seems to be delicate.

Sœur des Anges (1863).—Large, pale bluish, but very much inclined to crack and come defective, so that I fear it will never be of much service.

Louise Damainin (1864).—This I have not seen, but it is described as a virgin white.

Of these I should be contented with *Mademoiselle Bonnaire*, *Virginal*, and *Madame Alfred de Rougemont*.

As to "light" Roses I hardly know what your correspondent wishes; but I hope some day soon to give a list of Roses with descriptive notes, which may be some guide to amateurs; for this I am endeavouring to collect materials, and am sure that the widespread interest in the Rose will make it, even though imperfect, acceptable to many. I should add that amongst light-coloured Roses—that is, those of a very pale shade of rose and pink, nothing more beautiful than Louise Margottin and Emotion has been produced; but then they are Bourbons and not Hybrid Perpetuals, and if your correspondent does not think this an insuperable objection, he will find that these two flowers will give him at times perfect gems, and, like all the Bourbons, particularly in the autumn.—D., Deal.

PORTRAITS OF PLANTS, FLOWERS, AND FRUITS.

THLADIANTHA DUBIA (Doubtful Thladiantha).—*Nat. ord.*, Cucurbitaceae. *Linna.*, Dioecia Pentandria. Native of northern China, and seemingly of the Sikkim Himalaya, at from 5000 to 6000 feet elevation. It is a graceful climber with yellow flowers, certainly hardy enough for out-of-door cultivation in the south of England, and how far north requires and deserves proving.—(*Bot. Mag.*, t. 5469.)

DENDROBIUM NODATUM (Knotted-stemmed Dendrobium).—*Nat. ord.*, Orchidaceae. *Linna.*, Gynandria Monandria. Native of Moulmein. Introduced by Messrs. Low & Co., Clapton Nursery. Flowers creamy white and orange.—(*Ibid.*, t. 5470.)

CYANOTIS NODIFLORA (Nodose-flowered Cyanotis).—*Nat. ord.*, Commelynes. *Linna.*, Hexandria Monogynia. Native of South Africa. Flowers dark lilac. "It is a ready flowerer, blooming during June in an ordinary greenhouse."—(*Ibid.*, t. 5471.)

VITIS BAINESII (Baines's Gouty Vine).—*Nat. ord.*, Ampelidae. *Linna.*, Tetrandria Monogynia. Native of tropical Western Africa. It has a very gouty stem, resembling, indeed, a large bulb, with very succulent, leafy branches. Flowers green, inconspicuous, in a warm stove during July.—(*Ibid.*, t. 5472.)

AMPHIBLEMMA CYMOSUM (Cymose Amphiblemma).—*Nat. ord.*, Melastomaceae. *Linna.*, Decandria Monogynia. Tropical African plant. Flowers bright lilac. Stove plant.—(*Ibid.*, t. 5473.)

LINUM MACRAEII (Macrae's Linum).—*Nat. ord.*, Linaceae. *Linna.*, Pentandria Pentagynia. Sent from Lata, in Chili, under the name of *Linum Chamissonis*, by Mr. Pearce, collector for the Messrs. Veitch, but previously found by Mr. Macrae, at Valparaiso, and named after him. Flowers orange, blooming in July.—(*Ibid.*, t. 5474.)

ROSE—King's Acre, raised by Mr. Cranston, the nurseryman, of King's Acre, Hereford. Flowers bright crimson, and extra large and fine.—(*Floral Magazine*, pl. 213.)

LINUM CHAMISSONIS.—See above, *Linum Macraei*.—(*Ibid.*, pl. 214.)

CYMATIS EUBEO-VIOLEACEA.—Raised by Mr. G. Jackman, jun., of Woking Nursery, from seed produced by *C. lanuginosa* hybridised by *C. visicella*. Flowers 4 to 5 inches in diameter, rich reddish violet, perfectly hardy; blooms from July to the autumn.—(*Ibid.*, pl. 215.)

PHALGONIUM.—*British Sailor*, "of the *Diadem* class, but having a more distinct spot, the colour being a lively purplish-crimson, with good white throat." *John Hoyle*, of the class technically known as "painted flowers," upper petals deep maroon, with carmine edge; lower petals pinkish scarlet, veined and painted with dark crimson. Both raised by G. W. Hoyle, Esq., Reading.—(*Ibid.*, pl. 216.)

TRICHINUM MANGESII.—This really handsome amaranthaceous plant has been raised from Swan River seeds by Mr. W. Thompson, of Ipswich, and from specimens grown by that gentleman our figure has been derived. Very little is as yet known of its habits, but it is amongst half-hardy annuals that it will probably find its place in our gardens, even though it be naturally, as some other of our Australian so-called annuals are, of more extended duration. The plant forms at first a tuft of radical leaves, which are long-stalked and oblong-spathulate in form, smooth, and of a deep green colour. From among these arise the flowering stems, to the height of 1½ foot; they are furnished sparingly

below with lance-shaped sessile leaves, become slightly branched, and each branch terminates in a crowded oblong-oval spike, which consists of scarious rosy-coloured bracts, from amongst which issue the rosy purple flowers, these protruding considerably beyond the bracts. Both bracts and flowers are clothed with long conspicuous hairs. "Few more lovely plants," observes Sir W. Hooker, "have been introduced to our gardens than this, which is one of the most striking of some fifty species known to botanists;" and this encomium we think our figure will be found to justify. Mr. Thompson, who fortunately got a few of his imported seeds to vegetate, describes the root as being apparently perennial, throwing up several branched stems, each branch bearing one of the handsome heads of flowers. The copious white hairs, so characteristic of the genus, with which the florets and bracts are clothed, give, he remarks, a singular aspect to the plant, and contrast effectively with the Amaranth-purple petals. Under the lens these hairs are pretty objects; owing to their denticulations the germination of the seed, moreover, revealed a peculiarity worthy of note. The plumule, instead of rising from between the two unequal seed-leaves as in most plants, was found to be emitted from a point considerably below them. The same thing occurs, he adds, in *Dodecatheon meadia*. *Trichinum Mangesii* was first described by Dr. Lindley some twenty years since in the "Botanical Register," where it is spoken of as a most beautiful plant, with the heads of flowers 3 inches across. It has not till now, however, found its way into our gardens.—(*Florist and Pomologist*, iii., 217.)

DWARF FRUIT TREES.

I DESIRE to plant some dwarf standard Pear trees, and am anxious that as little shadow as possible should be thrown over my borders. I should feel obliged, therefore, if you would inform me whether such trees can be careful pruning and management be kept at a height of 5 or 6 feet and bear a crop. Should I have them on the quince stock? and how should the ground be prepared for their reception? Also, I should be glad if you could let me know what sorts would be most suitable to our Yorkshire climate (near Doncaster), and on a limestone soil? I think of putting in twelve trees. I presume they should be procured from some nurseryman in my own neighbourhood, as if brought from the south they might find this climate too bleak.—YORKSHIRE.

[We would not have them on the quince stock on your dry limestone subsoil. You can keep them dwarf by lifting or root-pruning annually in the autumn. The soil will require no preparation, but the roots should be carefully spread out in planting, so as to be about 6 inches below the surface, and we would mulch the surface during summer. It is of no importance whether you purchase your trees from a nursery in the south or north of England. The following is a list extracted from Mr. Rivers's "Miniature Fruit Garden," and we shall take this opportunity to publish what he says in the same useful and interesting little work about bush Apple trees:—

"The following varieties are well adapted for bush culture, as they are spreading in their growth and difficult to form into compact pyramids, although they may be made into spreading and prolific conical trees. It ought, however, to be mentioned, that those sorts—such as Louise Bonne of Jersey, which form handsome pyramids, make very pretty compact bushes by cutting out the central branch to within 3 feet of the ground; so that pyramids may be easily formed into bushes. I may add that these bush Pears produce the very finest fruit from their being so near the heat and moisture-giving surface of the earth.

"In situations near the sea-coast exposed to 'sea breezes,' small fruit gardens may be formed by enclosing a square piece of ground with a beech hedge or wooden fence, and planting it with bush trees. A piece of ground 500 square feet will be large enough to cultivate thirty trees at 4 feet apart in it, or twenty-five trees at 5 feet apart. Many a sea-side cottage may thus have its fruit garden.

"*List of Pears Adapted for Bush Culture.*—Alexandre Bivort, January; Joséphine de Malines, March; Marie Louise, October; Winter Nelis, December; Beurré d'Amanlis, September; Beurré de Rance, March; Beurré Diel, December;

Beurré Giffard, August; Beurré Goubault, September; Doyenné Boussoch, October; Jargonelle, August; Conseiller de la Cour, November; Dr. Trouseau, December; Zéphirin Grégoire, January; Nouveau Poiteau, November; Jalousie de Fontenay, August; Catillac (for baking), December; Léon le Clerc de Laval (for baking), March.

"*Apples as Bushes for Market Gardens.*—Our market gardeners, as a rule, are very deficient in their knowledge of fruit-tree culture, and they have much to learn. The usual practice with them is to plant standard or half-standard trees in rows, some 20 or 30 feet apart, and between them Gooseberry and Currant trees. The ground is dug between the trees in spring deeply, and often carelessly. Nothing can be more barbarous, for the ground is so shaded that no surface roots can have the benefit of air and the heat of the sun; and if by any chance they could come to the surface, they are, as a matter of course, destroyed by the spade. It is true that in some of the rich market gardens near London large quantities of fruit are grown in spite of the uncouth treatment the trees receive, but this does not alter the case.

"In a well-ordered fruit garden every kind of fruit should have its department, and instead of seeing, as in Kent, a row of trees of all sorts, mixed in the most heterogeneous manner, no mixture of species should be allowed; every kind should have its allotment—Apples on the Paradise stock, ditto on the crab stock; Pears on the quince stock, the same on the pear stock; Morello Cherries as pyramids on the Mahaleb stock—the best of all methods for their culture—and the various kinds of Duke Cherries on the same stock; Heart and Bigarreau Cherries on the common cherry stock; Plums as bushes, pyramids, or half-standards, should all be separated, and not planted higgledy-piggledy, as they have been and are now. The sound-headed market gardener will, when his mind is turned to improved fruit-tree culture, see all this, and make his fruit garden a pattern of order.

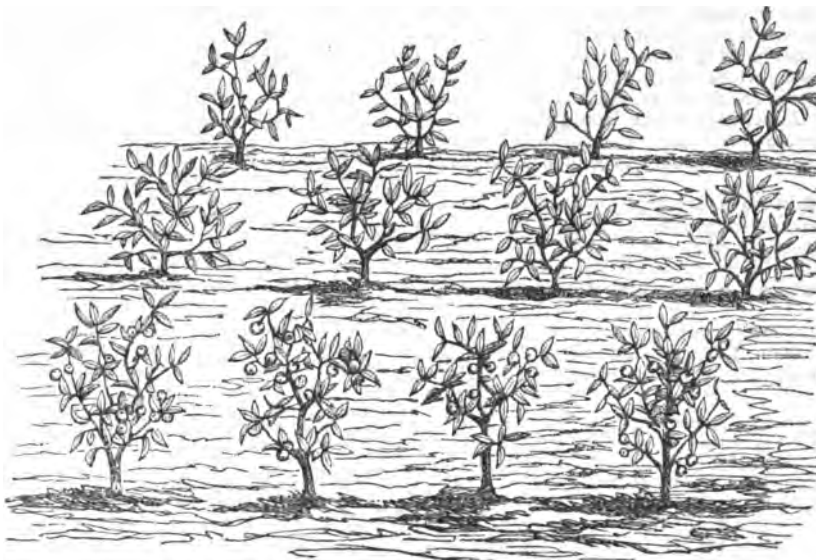
"I have been led into these remarks on market garden fruit-tree culture by my own experience, and especially into a consideration of the great improvement that may be made in the culture of Apples on the English Paradise stock. These trees will this season, the third of their growth in their present quarters, and the fourth of their age, give an average of a quarter of a peck from each tree, so that we might have, from 4840 trees, growing on one acre of ground, 302 bushels of fine Apples, which, even this abundant season (1864), would be (if Cox's Orange), worth 5s. per bushel, or £75. In 1866, the trees then averaging half a peck each, would double this sum, and make an acre of Apple trees a very agreeable and eligible investment. The kinds likely to sell best in the markets, and which are most productive, are the following:—Cox's Orange Pippin, Reinette Van Mons, Ribston Pippin, Sturmer Pippin, Scarlet Nonpareil, and Dutch Mignonne. These are dessert Apples. The following are valuable kitchen Apples, and abundant bearers:—Hawthornden, New Hawthornden, Small's Admirable, Cox's Pomona, Keswick Codlin, Dumelow's Seedling, Lord Suffield, Norfolk Bearer, Duchess of Oldenburgh, and Forge Apple. Such large varieties as Bedfordshire Foundling, Blenheim Orange, and Warner's King, should have

more space, and be planted 4 feet apart, and be thinned out by removal, as recommended for those planted 3 feet apart. I refer the reader to pp. 53, 54 for the proper method of planting these bush Apple trees, which is exactly that recommended for bush Pear trees on quince stocks.

"It may be by some made a question of expense, for although the return must be large and profitable, the purchase of nearly 5000 Apple trees would involve a large outlay. To this I reply—first, that stocks costing only a small sum per thousand may be planted and grafted where the trees are to grow permanently; and, second, that a large demand, which my method of planting would create, will also create a cheap supply. The preparation of the ground should be as follows:—It should, previous to planting, be forked over to a depth of 20 inches; if very poor and exhausted, from 30 to 40 tons of manure may be forked in—not more, as trees such as I have recommended—viz., Pears on the quince stock, and Apples on the English Paradise stock, do not root deeply—this ought to cost £6 13s. 4d. The annual expenses are forking the surface in spring, £1 6s. 8d., and hoeing the ground—say four times during the summer, £1 4s. I give the amounts paid here for such work. Then comes the summer-pinching of the shoots by a light-fingered active youth, and this may at a guess be put down at £1, making the aggregate annual expenses £3 10s. 8d., or say under £4. The

large return will amply afford this outlay, even adding, as we ought to do, the interest on capital and rent.

"It will be seen that what I propose is in reality a nursery orchard, which may be made to furnish fruit and trees for a considerable number of years. To fully comprehend this, we must suppose a rood of ground planted, as I have described, with 1210 bush Apple trees. In the course of eight or ten years half of these, or 605,



may be removed to a fresh plantation, in which they may be planted 6 feet apart; they will at once occupy half an acre of ground. At the end of sixteen or eighteen years, every alternate row of trees in the first plantation, the rood, will require to be removed, which will give 302 trees to be planted 6 feet apart, leaving 303 in the original rood. The 1210 trees will by this time occupy one acre of ground at 6 feet apart. With proper summer-pruning or pinching they will not require any further change, but continue to grow and bear fruit as long as they are properly cultivated. The great advantage reaped by the planter is the constant productiveness of his trees; from the second year after planting they will be always 'paying their way.'

"The unprejudiced fruit-cultivator will quickly find out the great advantage of my mode of Apple and Pear cultivation.

"In the usual old-fashioned mode, standard Apple trees are planted in orchards at 20 feet apart, or 108 trees to the acre. If the soil be good, and the trees properly planted, and the planter a healthy middle-aged man, he may hope at the end of his threescore and ten, to see his trees commencing to bear, and may die with the reflection that he has left a valuable orchard as a legacy to his children, but has not had much enjoyment of it during his life. Now, although, like most fathers, I have a strong wish to benefit my children, I hold the idea that one ought also to think of one's own

gratification; and so I plant trees, and recommend the planting of them, that will give me *some* satisfaction, yet leave a 'remanet' for my children.

"A French pomologist who paid me a visit last year, said—'Ah! now I find an Englishman planting for himself as well as for his children;' and went on to say that he was struck by seeing in England so many standard trees in market gardens, the planters of which could have derived but small benefit from them; and the apparent ignorance of fruit gardening as a lucrative occupation. This he, in fact, imputed to our climate, which, Frenchman-like, he thought totally unfit for fruit culture in the open air, yet felt much surprised to see here the produce of a well-cultivated English fruit garden, in a climate not nearly so favourable as the valley of the Thames.

"I have only to add that, besides my plantation of Cox's Orange Pippin, I have another of upwards of 400 trees, which has now been in existence upwards of ten years, so that I am not theorising, but deducing facts from a sound basis."

The reader is referred in the preceding page to directions given in pages 53 and 54 of Mr. Rivers's book for planting and managing bush Pear trees; we therefore give one more extract to render this novel mode of culture fully intelligible.

"The plantation should be a sort of nursery, and for this purpose the trees should be planted 3 feet apart row from row, and 3 feet apart in the rows. A piece of ground planted after this method will contain 4840 trees per imperial acre. The trees may be suffered to remain at the above distance from each other unroot-pruned and unremoved for seven, eight, or ten years; and then, as they will nearly touch each other, every alternate tree should be removed and another plantation formed. The removal of the trees should be done carefully, so that those left will stand 4½ feet apart, and in quincunx order, thus— " This may be done as follows:

"Presuming the first row to consist of ten trees, begin at the first row by removing the 1st, 3rd, 5th, 7th, and 9th trees; in the second row remove the 2nd, 4th, 6th, 8th, and 10th; in the third row again the 1st, 3rd, 5th, 7th, and 9th trees, and so on with all, and through all the rows however long. At this distance they may remain for sixteen, eighteen, or twenty years. At the end of one of these periods every alternate row of trees must be removed, leaving the permanent trees 6 feet apart. The periods of removal must to a certain extent depend upon the nature of the soil; if this is of high fertility the removal of the trees must be commenced at the earlier period."

Mr. Rivers depends upon rigid summer pinching of the young shoots, which he finds retards the rapid growth of the trees, forms them into compact round bushes, and brings on remarkable fertility.]

CULTIVATION OF THE MELON.

(Continued from page 274.)

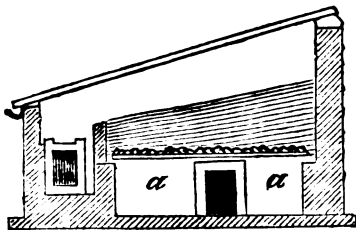


Fig. 14.

Fig. 14 is a pit to which bottom and top heat is supplied by flues, one in front for top heat, and another under the bed in a chamber, *a*. The flue passes along the centre of the bed first, and returns along the front. The chamber is covered with flagstones, on which is placed a little rubble, and then soil to the thickness of 1 foot. The plants may

either run over the bed, or be trained to a trellis fixed 9 inches from the glass

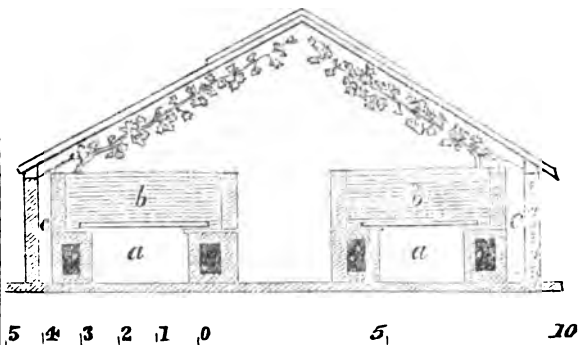


Fig. 15.

Fig. 15 is a section of a span-roofed house heated by flues. The flues are made to furnish both top and bottom heat, and between them are chambers, *a*, *a*, which communicate bottom heat to the beds, *b*, *b*. The flues are partly under the beds, to which they communicate heat by the spaces left between the flagstones and the sides of the beds, as well as by the chambers, *a*, *a*; whilst top heat is afforded by the sides of the two centre flues, and the heated air ascending from the openings, *c*, *c*.

Besides the houses already described, there are many others differing only in being modifications of them; but I shall pass over these, only giving another plan by which Melons can be grown for the million.—G. ABBEY.

(To be continued.)

MADAME VAUCHER, CLOTH OF GOLD, AND GOLDEN CHAIN GERANIUMS.

WITH reference to the communication of your correspondent, "J. P. M.," regarding the flower of Madame Vaucher Geranium, and others, changing colour, I myself noticed it in Madame Vaucher, the others I do not possess. In the late dry weather the flowers were almost as pink as Trentham Rose, but as nearly like those of Madame Chardine as possible; even now (and we have had plenty of rain) I can perceive no material difference in them. Madame Vaucher is certainly a little lighter, but it would not be distinguished from the other by a casual observer. With regard to the Cloth of Gold and Golden Chain Geraniums, they have been growing here side by side this summer, the Golden Chain making scarcely any progress, while Cloth of Gold is very luxuriant, and I think that in the damp climate of the north of Ireland it will speedily take the place of Golden Chain. I may add that bog mould is freely used at bedding-out time.—G. COVERT, *The Gardens, Crom Castle*.

PRUNING THE SHOOTS OF ORCHARD-HOUSE TREES.

I HAVE this season followed the directions in Mr. Rivers's book, "The Orchard-House," with great success so far, but having ceased to pinch in the trees at the end of July, as he directs, I now find them full of shoots a foot long, and I know not how to treat them. I see in your Number of the 27th ult. your Guernsey correspondent speaks of the present as the time for pruning, and in the "Doings of the Last Week" your Journal speaks of cutting the roots which have penetrated through the pots. Mr. Rivers directs this to be done later: I am, therefore, anxious to know both what pruning I must do as to the long shoots grown in August, and where I must prune, either shoots or roots.

I must add my own testimony to the success of an orchard-house as far as one year's experience allows me to do so. Nothing can be more satisfactory. My Peaches have been large, some weighing nearly 6 ozs., and perfect in flavour. My Nectarines, also, were first-rate.—C. F.

[You may shorten the shoots now, but we would rather

defer it later, so that you could more clearly discern a young leaf-bud—a shoot-bud to cut back to, as it is undesirable to cut to a fruit or fruit-buds. There will be little difficulty as to the short difference of time in the root-cutting, as referred to in "Doings of the Last Week," and the work of Mr. Rivers. In the former case it was judged expedient to lessen growth and hasten maturation, and, therefore, the pots were lifted up, and what roots were outside were cut away. There were so few of them, that the pots being well watered the plants scarcely flinched a bit. Very likely if the bright weather had been foreseen the operation might have been delayed a week or two; as it is, the appearance of the trees is all that could be wished. As soon as you like you may stump back the long shoots made in August, but cut to a wood-bud. If scarce of wood behind, such young wood would bear after such an autumn as this; but if you have enough of wood behind, little or none of the August-made will be wanted. It has encouraged root-action, and the presence of the shoots will cause your buds to break stronger next season if other things are properly attended to, as we feel certain they will be from your account of your success. But for keeping the trees or bushes compact, and the fruit-spurs near home, many growers allow a little wood as you have done, as it makes the tree stronger on the whole than close continued pinching.]

BRYN-Y-NEUADD.

This, the residence of John Platt, Esq., is situated near the seashore, and not far from Llanfairfechan railway station on the London and North-Western Railway, seven miles from the city of Bangor and the same distance from Conway.

After a week's ramble through some of the most interesting parts of North Wales, exploring the beauties of mountain and ocean scenery, I came unexpectedly upon this princely place. The house, a very neat and rather extensive structure, in the Gothic-Italian style of architecture, is backed by the fine mountain scenery of Caragfawr and Penmaen-mawr, and from its situation near the coast has a very imposing appearance.

A few minutes' walk from the railway station, along the right of which is a wall bounding part of the domain, with the park, brought me to the principal garden-entrance, near which is situated the head-gardener's cottage, a good substantial structure, and built in harmony with the other buildings in the place. On making application at the cottage I was informed that Mr. Eastwood was in the garden, and thither I at once made my way, and introduced myself as one of the fraternity, asking the favour of a look through the grounds, &c. This brother of the spade at once acceded to my request, and with that amount of courtesy and good humour, which ought to distinguish every one connected with so interesting an occupation, showed me the whole of the garden establishment.

The kitchen garden and forcing-houses are in extent and character quite in keeping with the magnificence of the place: some idea may be formed from the fact that there is 270 feet of lean-to hothouses fitted up very completely, and in which was a mixed collection of fruit and flowering plants.

The first house I entered in this range was a Peach-house, the crop from which had been gathered, and the trees were in remarkably fine health, with fine foliage and well-ripened wood. The fruiting and succession Pines, which occupy a portion of this range, are in fine health, and promise successful results.

In one of the tropical houses in this range was a magnificent collection of ornamental-foliaged plants. The following I noticed as being remarkably fine—viz., *Croton variegata*, *Croton picta*, *Dracena ferrea versicolor*, *Begonia Rex* and its varieties, *Cyanophyllum magnificum*, *Cissus discolor*, *Coleus Verschaffelti*, *Caladium bicolor splendens*, *Pandanus javanicus variegatus*; and besides these, there were many others too numerous to mention.

At the end of this range of houses a door leads through the back wall to a Fern-house, which is arranged so as to produce an artistic effect. The back wall and ends of this house are studded with a variety of rustic materials, into

which, at suitable places, are introduced plants of this interesting family.

In addition to the range of houses just described there are four span-roofed houses on the Paxtonian principle, each 105 feet long and of various widths. They range north and south in front of the principal lean-to range, and are occupied with a variety of fruits. Conspicuous amongst them is a Black Hamburgh-house, in which the Vines are remarkably strong, and with well-ripened wood, bearing large well-shouldered and finely-coloured bunches. The Muscat-house in this range is a picture of splendid fruit and foliage. Considering the short lapse of time since the Vines in these two houses were planted, which I understood did not exceed two years, they surpass anything I have previously seen for luxuriance and healthy strength. The Peach and Nectarine trees in the houses are evidently quite at home; they are particularly clean and vigorous, with short-jointed and well-ripened wood. I was informed by Mr. Eastwood that they had produced a heavy crop. I noticed, also, some fine Peach and Nectarine trees in pots for early work looking promising, also some strong good-shaped Pear trees in pots, affording fine examples of what can be done with good management in this mode of culture.

The whole of the extensive range of houses is heated on the one-boiler principle, the necessary precaution having been taken to introduce a second boiler in case of accident to the one in use.

There are four acres of kitchen garden in two divisions, the walls being furnished with suitable trained trees, and the quarters for vegetable culture are systematically arranged. The names of the various kinds are neatly painted on wood tallies—a feature which should not be lost sight of in kitchen as well as in flower-garden culture.

I had almost forgotten to mention that there is a complete range of sheds at the back of the principal range of hothouses, and the bothy for the young men. I could not help noticing this necessary appendage from its elevated position—a feature very often lost sight of in the construction of young men's rooms, but of which so much has been previously written that by some it may be thought unnecessary to name it here.

I observed a nice lot of strong promising Strawberry plants in pots prepared for forcing; also collections of *Cinerarias*, *Primulas*, *Azaleas*, *Camellias*, &c., being slightly accelerated for conservatory decoration during the winter months.

The flower garden and dressed grounds are laid out so as to harmonise with the style of the mansion, and are in extent about five acres. Bedding plants to the number of 25,000 have this season been planted out. A very neat geometrical flower garden on gravel is arranged on the drawing-room side of the mansion, at the termination of which is a neat ornamental span-roofed conservatory 120 feet long by 15 feet wide, which was gay with a variety of well-grown plants. In the grounds is a rustic summer-house happily arranged, and commanding fine and extensive views of the opposite coast scenery; from this point with a single glance of the eye can be seen the whole line of coast stretching from the point near Penmon, along the shores of Beaumaris and Garth Point, near to the Menai Bridge and Bangor, when, by a slight turn of the head, the eye rests on the beautiful richly-wooded scenery of Penryn Park and Castle, the varied and extensive domain of Colonel the Hon. E. G. Douglas Pennant, M.P., the proprietor of the far-famed Penryn slate quarries. I shall not soon forget the delight with which I gazed on the rugged mountain scenery in this immediate locality, blending as it does with the softening touch of dressed grounds, and the whole on a magnificent scale. The lawn and pleasure grounds at Bryn-y-Neuadd are for the most part laid out in the picturesque style. The whole, having been recently formed and planted, has not the effect at present that it will ultimately produce when some of the many Conifers and other specimen trees and shrubs shall have attained a moderate size. This fine place, so delightful in its landscape and pleasure ground scenery, is managed by the indefatigable gardener Mr. Eastwood, with the assistance of ten men; and, aided by his worthy employer, I have no doubt that he will succeed in making this place and its productions rank high in the horticulture of Wales.—JOHN GOWEN, *Rose Cottage, Redditch.*

WORK FOR THE WEEK.

KITCHEN GARDEN.

The decline of the late crops of Peas, Beans, Cauliflowers, &c., should be followed by their immediate removal, and no decaying or useless vegetable should at this moment be allowed to cumber the ground. If the vacant spaces be not immediately required, they had better be rough dug or ridged, for exposure to the ameliorating influence of frost and thaw. The distribution of manure should be governed by a due consideration of the late and future crops. For instance, the Onion quarter has probably received manure sufficient to carry a crop of Cabbage without further assistance. Strong-growing Peas and Beans impoverish the land; quarters which have been thus occupied might be appropriated to early Potatoes in due season. *Asparagus*, the stems should be removed, and an adequate quantity of seed collected for the yearly sowing. The out-door Cucumber-bed, stirred over, will be suitable for August-sown Cauliflowers, which will require the protection of hand-glasses. Some prefer keeping their Cauliflower plants in small pots under glass. *Lettuce*, a good supply of the late sowings should be planted in situations best calculated to afford them protection in the winter. When the accommodation of pits or frames can be afforded a quantity might be planted within them to insure a regular supply, independent of the weather. Remove the leaves from Rhubarb and Sea-kale intended for forcing, and keep a look-out for slugs and weeds.

FRUIT GARDEN.

The principal routine here will consist in gathering and storing all the late varieties of Pears and Apples. The present is the best time for lifting and transplanting very vigorous unfruitful trees on the walls. Apricots, Peaches and Nectarines, Pears, Plums, &c., may be so treated with great advantage, and after the operation is completed they should be well mulched up for the winter. Fill up all the vacancies on the walls with young trees, never let this be left undone till spring, if it can possibly be avoided. Where root-pruning is considered necessary, now is the time to see to it.

FLOWER GARDEN.

Scarlet Geraniums, Fuchsias, &c., which it may be intended to winter for use next season, to be taken up immediately and placed in safe quarters. Variegated Geraniums will not bear much frost, and where the plants have to be wintered in situations which are not very suitable for them, they should be taken up before they are injured, as they will be much more liable to damp off, and die back in winter, if the wood is at all touched by frost. They should not be cut back, but be kept over the winter just as they are lifted from the beds. Cut them back early in spring after starting them into growth, when the cuttings will root very freely in heat. The autumn-rooted stock of Verbenas, &c., must be well attended to, keeping them perfectly clear of green fly, and exposing them freely to air on every favourable opportunity, so as to prevent anything like growth after this season, and to keep the plants hard, in which state they will be much less liable to fog off under confinement for a week or two in winter, than if they were kept in a soft growing state until overtaken by severe weather. Except where alterations are in hand, the principal work in this department for the present will be mowing and clearing up, and if anything like neatness is to be maintained, sweeping up leaves will soon require daily attention; also, see to getting gravel walks thoroughly cleared of weeds and moss; roll them frequently when wet to keep the surface hard and smooth. Steps should also be taken to fill up the beds as they are cleared, for the purpose of contributing to the enjoyment of spring. A miscellaneous mixture of dwarf early-blooming shrubs, perennial plants, Wallflowers, &c., and bulbs are most commonly planted.

STOVE.

Pursue a kindly course of treatment with the Euphorbias, Gesneras, and such things for winter-flowering, these will soon be of great service. A temperature of from 65° to 70° by day, and 60° by night will suffice, still maintaining a somewhat moist atmosphere in the afternoon and during the night, with a free circulation of air, keeping also a quiet

ventilation all night. As some of the Orchids become ripe, such as the *Catesetum* family, the *Cynoches*, *Lycastes*, &c., they may be removed to a drier, and somewhat cooler atmosphere. The *Phaius grandifolius*, with the *Stenorhynchus speciosus* will soon begin to blossom, also *Cypripedium insigne* and *venustum*. Let them have plenty of heat and moisture.

GREENHOUSE AND CONSERVATORY.

Whatever watering may be necessary in the conservatory should be done early in the day, so as to allow of the superfluous moisture being dried up before night, for there is much more danger from damp among plants in flower at this season, than from a rather low temperature; and on cold, dull, cloudy days it will be advisable to use a little fire heat, with air during the day, so as to secure a moderately dry state of the atmosphere before night. Use fire heat very sparingly, however, and only when it may be necessary to prevent injury from damp, or to prevent the temperature falling below 40°. Hyacinths and other Dutch bulbs, if not already purchased, should be procured and potted without delay. Summer-flowering twiners which usually become unsightly by this time, should be cut back rather freely. Shade can now well be dispensed with, therefore not a spray that can be spared should be left to obstruct the light. Let *Azaleas* be tied into form as soon as it can be done, in order to give a neat appearance. Look carefully after red spider on *Bommas*, *Chorozemas*, and anything else liable to that pest. Red spider is destroyed by laying the affected plant on its side and well washing the under sides of the leaves with the engine, applying the water with as much force as the foliage will bear. Let *Cyclamens*, *Lachenalias*, *Oxalis*, *Centradenias*, tree Violets, and such little winter favourites, be kept on a warm front or end shelf entirely unshaded. Let pot specimens in bloom be frequently rearranged, so as to make the most of them, for the finest specimens become too familiar to be interesting when allowed to remain too long in one place.

PITS AND FRAMES.

Regulate the general bedding stock, and get the majority established in small pots. Give as much air as possible, and restrict the supplies of water to mature the growth as far as possible. All temporary pits for their accommodation should be completed by this time, and glazing and other repairs forthwith finished. Common mats afford scarcely sufficient protection to the half-hardy plants in store pots; for such purposes a stock of straw or reed mats should be made in wet weather.—W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

The weather is threatening to be again as dry as ever, with frosty nights, bright sun, and keen east winds. So long as the dryness continues we shall suffer but little from frost. Part of the Carrot and Beet should be taken up when nice and dry. Hunted after grubs that had begun on our Lettuces, Endive, and young Cabbages. Go where we will, and meet whom we will, the grubs are the prevailing cry. In our neighbourhood it has made some fields of Turnips that looked well in the end of July a desert. When withered, just like our Cabbages, there would be one or two of these fat leathery grubs at every root. Gas water, or a little gas tar sprinkled over the land, is a good thing for keeping them away. When once there, there is little remedy except constantly looking after them whenever a plant flags. We have sprinkled a little tar between our rows of Cabbages from a straw brush, and we imagine it has helped to keep the grub from the plants; and in the ground so sprinkled the plants do not suffer. Soot, lime, ashes, &c., which do some good against slugs, snails, and worms, are quite inoperative against the grub. "Catch and kill is the only cure," and the smell of gas tar the best preventive against the fly mothers, or daddy longlegs of some sort, inserting their eggs. In digging or trenching for Cabbages, &c., a little gas water or gas tar sprinkled on the soil as the work proceeds, will also cause those not killed to bolt from such quarters. The craneflies or daddy longlegs will soon be found on covered colonnades, fences, &c., and sometimes we have swept a peck in a morning from a stone pavement.

These are quite innocent of themselves, but we must lessen the number if we would be free from leathery grubs.

Caterpillars.—Just so with the beautiful whitish-coloured butterfly so plentiful in the kitchen garden in summer. They do no harm; but the caterpillars that come from their eggs would soon clear a quarter of Cabbage, and make the finest Cauliflower unfit for the table. We caught great numbers of these butterflies this season, but that has not caused us to be free from caterpillars. Fortunately so far, the daddy longlegs tribe are almost helpless early in the morning, and can do little in the way of escape. Unfortunately, however, the grub preys beneath the surface, whilst the caterpillar in its feeding state is more easily seen. In the case of young plants a dusting of powdered lime and soot will generally dislodge if not quite kill them. In the case of large plants forming hearts it is best to pick them off. A quick-handed boy, with a vessel with quicklime in it so shaken as to cover the caterpillar, would pick off some scores in the time he would run down a butterfly. Where such things become ravaging pests instead of interesting curiosities, boys may well be employed at hunting the butterfly and picking off the caterpillars.

Celery.—Gave the beds a good soaking with sewage water for the last time, and, the ground being so dry, we were tempted to give the whole rather more than a half earthing-up; and will soon follow in the mode previously referred to, as, after this month, unless the weather is excessively dry, there will be little danger of excessive dryness at the roots.

Cauliflower.—Planted out young plants under hand-lights on banks facing the south, in the mode lately detailed. Placed two or three leaves over Cauliflowers fit for use, in case either the bright sun or a little frost might injure it. In such weather the great extremes of heat and cold are apt to give the heads a tanny-like appearance. Examined these heads for slugs and caterpillars. A few cold nights will help to settle the latter. Watered the crops coming on, and proceeded with hoeing, digging, and attending to other things much the same as in previous weeks.

FRUIT GARDEN.

Went over the second growth from Apples and Pears on low standards; likewise thinned and stopped a little Currants and Gooseberries. As the season for planting is advancing, we would advise all having small gardens to grow

Gooseberries and Currants on strained wire trellises. These, well nipped-in, will soon be full of fruit-buds, will bear immensely in little room, and will be easily protected from birds, &c. A singular fact came to our knowledge this season—that Currants and Gooseberries that were cleared by wasps, when grown in the usual bush form, escaped being touched when grown on the upright trellis near at hand. This, we fear, however, might be only a striking coincidence. We think the wire and trellis had been tarred, and, though we detected nothing, the wasps might have found something distasteful to their sense of smell. In this neighbourhood it would not be advisable to plant, however, until moist weather, as the ground is very dry—drier than ever we have known it, and water is again getting scarce.

Strawberries.—Cleaned amongst the rows of beds and slightly surface-stirred. Would have liked to water as some fine plants are flagging again. Lifted the pots intended for forcing to prevent the roots going even into a hard gravelled bottom, so as to arrest growth. Picked off all weeds and runners, and for the second time gave the plants more room by setting the pots further apart that every leaf may receive the full benefit of the sun and air. We have given manure water when it was required. We will let little more rain water soak them, but will turn the pots on their sides when rain comes. We will do this shortly with Black Prince, and the earliest small pots of Keens', to fit them for forcing by a period of rest, and in a week or so will place the pots on their sides on the north side of a fence.

Orchard-house.—Watered the trees in pots at all suffering from the drought. Gathered the most of the Plums, and some fine specimens of Apples and Pears from very small pots. Swept off a few of the leaves that were getting the

right autumn tint, and when we can find time, and a damp cloudy day comes, we will smoke them densely with bruised laurel leaves, not allowing any flare of flame however. A little precaution now may save much trouble afterwards. This simple smoking has been intended since the bulk of the fruit was gathered, but has not yet been carried into execution. Most likely will use some Capsicums with the laurel leaves, and the mixture will do no harm to anything except any insects that may be alive.

Peach-house.—Swept off the greater part of the leaves, and gave more air now, as the dry heat from the sun—of which we took advantage to harden and consolidate the wood—if continued, would be apt to make the fruit-buds start. We observe some three or four starting at the top of the house. We see little use in general for taking the glass off such houses, unless they be very early; and even in that case, if the wood was early matured, the trees would be rested more under the glass, with shade, than when fully exposed to the sun without glass. No shading will be needed unless for early houses.

Vineries.—Went over these, removing any berry getting mouldy, of which there were very few; and also taking away the most of the laterals, to give more light to the house, and also to concentrate more strength in the wood left for next season. Those who wish for Grapes in March must now have the houses shut up, and be getting the Vines to start slowly. Those who wish them ripe in the beginning of May should have the pruning done and the cleaning effected, and put gentle fires on by the end of the month. When Lady Downes', West's St. Peter's, and even Muscats, keep until March, there is less occasion for having Grapes at the beginning of the year, though to have them always shows good and careful gardening. In houses now full of Grapes ripe and ripening, air should be left on all night, unless in frosty weather; and, during these very sunny days, a little water may be sprinkled with a syringe over the floor, border, or stage in the house—not at all enough to damp the house, but just enough to moisten the atmosphere a little, to prevent anything like drying or shrivelling.

Pinery.—The Pines should now be made secure for the winter. When grown in pots and in tan-beds, &c., fresh material should be supplied for bottom heat. In general it will be safest not to plunge the pots much more than halfway, and to stir the bed and add fresh tan on the surface as the bed cools. The plants dislike much moving, and especially great and sudden changes of temperature, even though they by no means show it so much as plants with thinner leaves. A broken leaf it should be recollected never heals, and hence in beds well heated by hot water beneath, and where fine, fibry, turfy soil can be obtained that does not easily run together, and through which water passes freely, the best method of growing is turning the plants out, and during the growing season supplying them liberally with manure water at the suitable temperature. Some of our best growers keep only the young plants in pots, and plant out whenever they become nice stubby plants. If the right fibry soil is obtained, it matters however but little whether the plants are grown in pots or in the bed; but in the latter case the leaves are less easily or less likely to be injured. Such fibry turf as we refer to should be brown instead of dark, should be covered with grass (not with broad leaves, but with foliage like needles for smallness and hardness), should hang together like felt rather than be loose, from the small number of roots, and the short distance they run; and should smell sweet as a nut instead of sour after it has lain in a heap for a few months. The roots will not only run rapidly and be of large size in this material, but clear manure waterings will pass easily through it. A little lime in such water will keep worms, &c., at bay.

Figs.—Gathered most of those out of doors. Obtained some fine fruit from some in pots, removed from orchard-house into a pit, where they could be kept closer and warmer. Gathered freely from second crop in the small Fig-house, and cut away a good deal of young fruit that was not likely to ripen this season. The cutting off such fruit within an eighth of an inch or so of the stem is much better than tearing or rubbing them off, as the cut-scar healing over, young Figs will often come from the sides of the cut part,

and though they hardly show, or remain small during the winter, they will do good service next season. This thinning of redundant fruit that will not ripen, and the removal of wood not wanted, cannot be too quickly done in the case of trees intended to be forced early next season. One cause why the first crop of Figs of some sorts is apt to fall, is the heavy crop of young useless fruit that often hangs on the trees in the autumn.

Melons, where still deemed a matter of importance, must now be kept warm, and any moisture they require be given chiefly at the roots, without wetting the surface soil, unless the atmosphere is heated by hot-water pipes, so that plenty of air might accompany the heat. Where, as here, the fruit is now at a discount, the space will be better applied for storing plants of many kinds, as bedding plants, &c.

ORNAMENTAL DEPARTMENT.

Stove Plants.—Many Orchids, as Stanhopeas, now require less water; but in these cold nights fires will require to be used. Such winter-flowering plants as *Thyracanthus rutianus*, *Poinsettia pulcherrima*, *Euphorbia jacquiniiflora*, and late lots of *Gesnera zebrina*, will be greatly benefited by having a little bottom heat, and being kept for a few weeks in a rather warm moist atmosphere. A slight change to dryness will cause the flowers to come freely. *Justicias*, *Buellias*, &c., will require less attention and less heat to bring the flowers out in perfection. As little fire as possible should as yet be used, and advantage taken of the fine sunny weather to harden wood and ripen buds. Where houses have been shaded for the season with whitening, or anything of that kind, it would be well to lessen the shade as soon as, or even before, this bright weather changes.

Hardwooded Greenhouse Plants, especially the more tender of them, should now be placed under glass, but with plenty of air given to them, until the nights are colder. The same care must soon be bestowed on *Azaleas* and *Camellias* in pots. Many plants are much injured by having their roots greatly cooled at this season. For plants growing in the natural soil the temperature at the roots will be more equable than in the case of plants grown in pots, as the soil will not be so hot as the atmosphere in a hot day; but in such weather as we have lately had the roots will be much warmer than the head and branches during these clear cold nights. We just reverse the case with the generality of plants in pots now—the tops become sun-baked during the day, and the roots are ice-baked at night. If pots were set hollow to secure drainage, and were then partly or wholly plunged, the plants would enjoy many of the advantages of planting out, and escape some of the evils, such as over-luxuriance, involved often by growing a tree or plant turned out in rich suitable soil. Meanwhile, when we know how hot an exposed pot becomes during the day, and how cold it becomes by radiation and evaporation during the night, we must take some precautions against such evils; and one of the simplest will be to water when wanted, chiefly in the morning, so that the soil in the pots may become dryish before night.

Pelargoniums.—Had these mostly potted, or at least placed under cover. Potted, also, a second batch of *Cinerarias* and *Primulas*, *Mimulus*, &c. Now is a good time to prune and dress *Roses* intended for early flowers, and a little bottom heat and a rather moist but airy atmosphere will suit them better than any fire heat as yet to the atmosphere of the place. *Cinerarias* and *Calceolarias* can scarcely be kept too airy, moist, and cool, if frost be excluded. Give them heat of any kind, and whole hosts of insects will attack the plants as a reward for the extra nursing.

Bulbs.—All intended for Christmas and onwards should now be potted. Equal parts of sound sweet loam, old cow-dung well sweetened, and half a part of leaf mould and sharp sand will grow *Hyacinths*, *Tulips*, *Jonquils*, *Narcissus*, &c., in first-rate condition. The pots when filled should be set in a shady place, or if placed out of doors should be covered for 6 inches with old tan, ashes, leaf mould, sand, cinder ashes, &c., and no forcing should be attempted until the pots are filled with roots and the flower-stalks pushing. Bulbs intended for the flower garden (now still beautiful from its summer ornaments), should be placed on a dry hard bottom in any shady sheltered place—*Hyacinths* 5 inches apart, *Tulips* 2 or 3 inches apart, *Crocus* 2 inches apart—and then

be covered over with 3 inches of fine rich leaf mould and rough loam. These bulb-beds may so remain until the flower-beds are cleared, well dug, and prepared, and then the bulbs may be lifted with little balls, and scarcely suffer from planting.

Rolled, swept, and cleaned lawn round flower-beds, still very fair. Proceeded with putting in more cuttings of bedding plants, and removed many struck to more open positions.

Old plants of *Scarlet Geraniums* take up much room in winter, so that unless for particular purposes, young plants from cuttings now and a short time previously, will generally be as satisfactory as older plants, which must have more room in winter. No weather could be better for hardening-off all things struck under glass or protection of some kind; but though these should have all the sun possible, or that they are able to bear, they must be kept cool and airy at night, but free from all danger from frost. Plenty of air after sunset, and as much light and comparative closeness during the day as the cuttings will stand without finching, are the secrets for the successful striking of all plants, and especially those of the bedding kinds.

Preparations should now be made for taking up the more tender or rarer bedding plants—as *Golden Chain*, *Mrs. Pollock*, and *Cloth of Gold*; and for inserting the *Calceolarias* cuttings in a week or two. For most things young plants will be found the best for uniform beds, older plants are useful for high rows, pyramids, &c.

Florists' plants, as *Carnations*, *Picotees*, *Auriculas*, and *Polyanthus*, should be cleaned and placed under glass, well tilted back and front, night and day, chiefly that heavy rains may be thrown off, but of this there is little appearance, though they may come suddenly.—R. F.

COVENT GARDEN MARKET.—OCTOBER 8.

Foreign *Hamburg* and *Portugal Grapes* continue to arrive, and of home-grown fruit the supply is plentiful and good. Of *Pines* there is a moderate supply; *Peaches* and *Nectarines* are nearly over. In out-door fruit and vegetables we have nothing fresh to report.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.	
Apples.....	½	sieve	1	0 to 2	0	Mulberries	punnet	0	0 to 0	0
Apricots.....	dox.	0	0	0	0	Nectarines	dox.	0	0	0
Cherries	lb.	0	0	0	0	Oranges	100	10	0	14
Currents, Red...	½	sieve	0	0	0	Peaches	dox.	3	0	12
Black.....	do.	0	0	0	0	Pears (kitchen)...	bush.	5	0	10
Figs	dox.	1	6	2	6		dessert	1	0	3
Filberts & Nuts 100	lb.	60	0	80	0	Pine Apples	lb.	4	0	8
Cobs	do.	60	0	80	0	Plums	½	sieve	2	0
Grapes, Hamburgs	lb.	1	6	4	0	Pomegranates	each	0	4	0
Muscats	do.	3	0	7	0	Quinces	do.	2	0	4
Lemons	100	8	0	14	0	Raspberries	lb.	0	0	0
Melons	each	1	6	4	0	Walnuts	bush.	14	0	20

VEGETABLES.

		s.	d.	s.	d.			s.	d.	s.	d.			
Artichokes	each	0	4	to	0	6	Horseradish ...	bundle	2	6	to	5	0	6
Asparagus	bundle	0	0	0	0	0	Leeks	bunch	0	2	0	3	0	0
Beans Broad.....½	sieve	0	0	0	0	0	Lettuce	score	2	0	3	0	0	0
Kidney	½ sieve	3	6	4	0	0	Mushrooms	pottle	1	6	2	6	0	0
Beet, Red	doz.	1	0	3	0	0	Mustd. & Cress, punnet	0	2	0	0	0	0	0
Broccoli	bundle	1	0	1	6	0	Onions	bunch	0	4	0	6	0	0
Brussels Sprouts ½	sieve	2	0	2	6	0	Pickling	quart	0	6	0	8	0	0
Cabbage	doz.	1	0	2	0	0	Parley	doz. bunches	4	0	6	0	0	0
Capcoums	100	1	0	2	0	0	Paranips	doz.	0	9	1	0	0	0
Carrots	bunch	0	5	0	8	0	Pears	quart	0	0	0	0	0	0
Cauliflower	doz.	4	0	6	0	0	Potatoes	bushel	2	6	4	0	0	0
Celery	bundle	1	0	2	0	0	Radishes dox.	bunches	1	0	0	0	0	0
Cucumbers	each	0	6	1	0	0	Savoy	doz.	1	0	2	0	0	0
Pickling	doz.	1	0	3	0	0	Sea-kale	basket	0	0	0	0	0	0
Endive	score	2	6	4	0	0	Spinach	sieve	2	0	4	0	0	0
Fennel	bunch	0	8	0	0	0	Tomatoes	½ sieve	2	0	3	0	0	0
Garlic and Shallots, lb.	0	8	0	0	0	0	Turnips	bunch	0	2	0	6	0	0
Herbs	bunch	0	8	0	0	0	Vegetable Marrows	doz.	2	0	3	0	0	0

TRADE CATALOGUES RECEIVED.

Robert Parker, Exotic Nursery, Tooting, Surrey.—*Catalogue of Stove, Greenhouse, and Hardy Plants, Hyacinths, and other Bulbous Roots.* 1864-5.

William Paul, Paul's Nurseries and Seed Warehouse, Waltham Cross.—*Rose Catalogue, 1864-5; Descriptive Catalogue of Hardy Ornamental Trees and Shrubs; List of Beaton's Hybrid Bedding Geraniums.*

TO CORRESPONDENTS.

* * We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

LADY DOWNES' VINES (*F. B. L.*).—The large leaf belongs to a true Lady Downes' Vine; but after a careful comparison with several Vines of that variety the small leaves appear to belong to quite another sort, they being differently lobed and rounder.

HEATING BY GAS.—Will "S. J. H.," who described the apparatus he employs, oblige us by informing A. Maples, Esq., Spalding, Lincolnshire, where the apparatus can be purchased?

AMARYLLIDS (*James Curdsey, Adelaide*).—The Amaryllids you refer to can be supplied at from three to five guineas a dozen. Mr. Anderson asks us to refer you to Mr. Williams, Paradise Nursery, Holloway.

BOWLING GREEN PATCHY (*J. Tweedy*).—Leave it until the spring. Early in March sift over it a sufficiency of fresh, moderately fertile earth to barely cover the grass, say half an inch in depth; then sow over the half sown 2 lbs. of Suckling seed (*Trifolium minus*), and roll it in with a light roller. No raking is needed, except to make the earth sifted on level before sowing.

SOIL AND TEMPERATURE FOR PLANTS (*A. W. A.*).—*Aristolochia cymbifera* requires a compost of equal parts of turfy peat, turfy loam, and leaf mould, with a free admixture of silver sand. It is a stove plant, doing well when subjected to ordinary stove management. *Patestonia ornata* we do not know. *Philadelphus mexicanus* is hardy, and will grow in any soil, lightish loam being preferable.

WORMS IN POTS (*Ruby*).—We have repeatedly stated how to expel them from pots. Mix 14 lbs. of lime with thirty gallons of water, stir well, and forty-eight hours afterwards flood the pots with the clear liquid, having previously stopped the holes with clay or cork. The worms will come to the surface, when they are easily destroyed. After an hour or two let the drainage act. If this is not effectual repeat the dose. To make a bottom impervious to worms, mix boiling coal tar with ashes, form a floor 4 inches thick, lay an inch of small gravel on the surface, and ram firm. Another way is to place a layer of lime riddlings an inch thick, ram firm, add two more layers, and then sufficient coal ashes for plunging purposes. To prevent worms coming from the outside have edgings of boards 3 inches above the surface, and paint them with boiling gas tar. We will answer for them not troubling you afterwards if you take care not to place whole families in the pots along with the compost. There are plants with white flowers named *Ageratum latifolium*, *A. angustifolium*, *A. album*, and *A. consopium*, the last two of which come true from seed. Any seedsman can supply seed; but we believe the first two cannot be had from seed, it not being obtainable.

MUSHROOM-BED IN FRAME (*W. M. Newland*).—You made your bed all right, but you should have waited until it had heated, and ascertained the degree of heat before spawning. As it is you have spawned it, and the heat may probably be too much for the spawn. Whether it will heat or not depends of course on the thickness of the dung, and as to that you leave us in ignorance. It was wrong to place the spawn on the surface and cover it with soil. It should have been covered with an inch of droppings, and then with soil. You have done wrong again to water the bed, for moisture at this early stage tends to prevent the spawn running, dryness being essential for that. As you have made the bed and spawned it, we would advise you to wait for about six weeks and see what the result will be. You may water lightly a month hence, but give none until then, and afterwards cover the surface with an inch or two of hay or dry litter. The soil at this season in an unheated place will not require much, if any watering.

PREPARING ROSE-BEDS (*A Twelve-years Subscriber*).—In the first place it will be necessary to dig the beds out to a depth of 2 feet and remove the subsoil, laying the surface soil on one side, for it will do to mix with the new soil, which may consist of turfy loam, neither strong nor light, two-thirds, leaf mould one-third, 6 inches of well rotted manure being worked in at the time of planting. If the ground is well drained no stones will be needed at the bottom of the beds, nor are they of any value unless there be drains to take the water from them, for digging holes and placing rubble at the bottom is only making drains without outlets. If the ground is drained, 6 inches of brickbats or broken stones at the bottom of each bed will be serviceable. On this place a layer of turves, grass side downwards, and after mixing the old surface soil with the new compost lay it in the trench, and do not tread it more than can be helped. This done, put on 6 inches of well rotted manure, and fork it neatly into the soil. The beds should be made at once, and rather above the level of the surrounding surface, to allow for the soil settling before the Roses are planted in the beginning of November. The Roses planted five years should be taken up carefully, and the old long roots pruned to about one-half their length, but the fibres and small roots should not be cut, except to remove injured parts. Closer pruning than usual will be necessary, and it should be deferred until March. Dwarf Roses planted at the foot of standards will, to a certain extent, hide the bare stems; but if these are considered unsightly why not plant dwarfs only? No Roses will do well under the heads of standards, and they cannot be grown to perfection when their roots are intruded upon by other plants. It is best to grow one thing in a place and have it good.

SEEDLING GERANIUMS (*W. J. W.*).—Send specimens in flower to the Floral Committee of the Royal Horticultural Society. If the Committee commend them you can then offer them to some of our leading florists.

OLD COTTON CAKE AS A MANURE (*J. G. S.*).—We presume that you mean the refuse after the oil has been expressed from the Cotton seed. Like all other vegetable refuse, it is useful as a manure. We should spread it over the surface just previously to the last digging or ploughing before inserting the crop. It would benefit pasture land sown thinly on the surface early in the spring.

UPAS TREE (*An Old Subscriber*).—It is the *Antiaris toxicaria* of botanists, and is included in the natural order Urticeae, and Polygamia Dioecia of Linnaeus. It is a native of Java, Macassar, and Borneo, and is a tree having an abundant milky juice; it attains a height of 90 or more feet; leaves not unlike those of some of the Magnolias in substance and pale green colour, but slightly heart-shaped, and the sides not quite equal in size. In Hogg's "Vegetable Kingdom" it is stated that according to the analysis of Pelletier and Caventon, Upas antiaria contains an elastic resin having the appearance of caoutchouc, but differing in its qualities; a gummy matter; and a bitter substance, soluble in water and alcohol, in which resides the deleterious properties of the juice, and which appears to contain a new vegetable alkali. Strychnine has never been discovered in it. This poison leaves no trace behind it in the bodies of the animals that have died by its action; the blood-vessels are only filled with a blackish blood, as in asphyxia. Introduced into the veins, death is even far more rapid than when applied by a wound; eight drops injected into the jugular of a horse killed him in a minute and a half in a tetanic state. The flesh of animals killed by this poison may be eaten with impunity. So virulent does this tree appear to be, that even linen made from its fibre, insufficiently prepared, is so acrid as to cause the most distressing itching. But though thus virulent, the statements that it is death-fraught to rest under its shade are superlative exaggerations. There was, and probably is now, a large specimen in the Botanic Garden at Calcutta, and we have been under its shade, handled its bark, and gathered leaves from it with impunity.

FLOWER GARDEN PLAN (*A. W., Woolley Park*).—The Editors never supply plans; they only criticize those submitted to them. In "Flower Gardening for the Many," which can be had free by post from our office for five postage stamps, there are several plans and how to plant them; and a great number of other plans are distributed through previous volumes of this Journal.

MILLET'S MIGNONNE PEACH (*A Dartford Reader*).—It is the same as the Royal George, a very good Peach, and thrives well in a Peach-house.

FRUIT TREES FOR NEW ZEALAND (*B. Wells, Woolwich*).—A letter was forwarded to you on this subject, and is returned by the post office, marked "Not known in Woolwich." Send us a stamped envelope with your full address.

HYDROPULT (*An Old Subscriber*).—We believe that it is of American origin, and not patented in this country, but we are not certain. As all events there are two or three makers of them in England.

HEATING GREENHOUSE FROM KITCHEN BOILER (*A. G. T.*).—There will be a difficulty in heating your greenhouse from the kitchen boiler, owing to that boiler being 3 feet above the floor of the greenhouse. The lid being moveable and open, you cannot take the pipes in the house higher than the height of the water in the boiler, and the circulation would be impeded if you had the pipes inside the house lower than the water in the boiler. If you took your pipes round the house you would need to have the pipes that height, which would spoil your doorway from the passage and the doorway into the garden. With a close lid you could take the pipes up over the doorway, but in no case must they fall more than 3 feet from the floor. If your boiler had been 3 feet below the level of the greenhouse floor you could have taken pipes round three sides of your little house on the floor level. The simplest plan for you would be to have an iron or slate tank, or a stand of water-pipes of any shape most desirable, but on the same level as the boiler, placed anywhere between the two doors, which would be quite sufficient to keep out frost—that is, presuming you must heat from the boiler. The simplest plan in the circumstances would be a small iron stove inside the house, with flat top for an evaporating-pan to be covered with a lid when much moisture was not wanted.

NOTICE TO QUIT SERVICE (*A. P.*).—Probably you would be able to compel your employer to give you a full month's notice, or an equivalent in money; but the legal expenses, loss of time, and the disinclination to engage any one who has sued his master, would more than outweigh the value of the few shillings overplus. You had better state fairly to your master your willingness to leave at the time he wishes, but that you are entitled to a week's wages in addition; and, unless he is unreasonable, or there is some fact of which we are ignorant, he will give you your full due.

DATURA ARBORAEA CUTTING-BACK (*M. F.*).—You may cut the plant back when you like; but we should prefer, if you keep the plant in a low temperature in winter, just secure from frost, to cut it back about March, and then, as the heat increased, it would break vigorously; and if the wood was well ripened every fresh shoot would produce flowers. No plant will better stand pruning or cutting-in. We prefer plants 6 feet high to those 3 feet in height, when we can give them room, as the huge flowers look best when you can look up to them hanging down, or at least look to them on the level of the eye. At 3 or 4 feet high you only see the backs of the flowers.

HEATING AND GLASS FOR GREENHOUSE (*J. J.*).—We believe Mussett's apparatus answers very well. We should prefer either clear or rough glass to green, for a greenhouse, though we have little doubt but green would do. Light blue, or sky blue, does well.

PRESERVING WALNUTS.—"Can any of your correspondents inform me what will prevent Walnuts getting mouldy, when gathered and laid by? One of your correspondents mentions they may be kept moist by being placed in jars and kept in a cellar; but this will not prevent their getting mouldy, which they do first outside the shell, then inside the shell; the skin that covers the kernel becomes mouldy, and afterwards black, and soon the nut decays.—A. G. L." [We shall be obliged by information on this point. We wash them thoroughly, and then keep them in jars in a cold cellar, without their becoming mouldy.]

PROPAGATING WINTER CHERRY (*A Subscriber*).—The fruit is that of the Winter Cherry (*Physalis alkekengi*), a hardy herbaceous plant, readily increased by seed sown in spring. It is best removed in March, and the roots divided, which is a ready mode of propagating it. It will grow almost anywhere, but prefers light sandy loamy soil.

BOOKS (*H. U.*).—In about a fortnight the work on Vine culture will be published. It will be advertised in our next number. The "Cottage Gardeners' Dictionary" can be had from our office free by post for 5s. 8d.

CLIMBERS FOR HOUSE WALLS (G. C.).—We suppose you wish to cover the walls on every aspect with suitable shrubs and climbers, and other plants. North aspect: *Hedera* (Ivy) *argentea*, *Englemanni*, *latifolia* *maculata*, *palmata*, and silver-edged; *Virginian Creeper*; *Jasminum nudiflorum*, flowering in January; and *Cotoneaster microphylla*. East and west aspect: *Berberis Darwinii*; *Clematis azurea grandiflora*, Sieboldi, lanuginosa and its variety pallida, flammula (sweet scented), Hendersoni, visicella atropurpurea; *Atragene austriaca*; *Chimonanthus fragrans*; *Ornithoglossum pyramidalis* (Evergreen Thorn); *Pyrus japonica*, red and white; *Jasminum revolutum*, white and sweet; *Honeysuckles*—viz., *flexuosa* (scarlet), Trumpet, Dutch, early and late; and of *Roses*—*Ayrshire*, *Splendens*, *Dandee Rambler*, *Queen of the Belgians*, *Alise Gray*, *Rosa*, and *Thornedays*; *Evergreen*, *Princess Marie*, *Myrianthes*, *Williams's Climbing*, *Princess Louise*, *Felicite Perpetue*, and *Adelaide d'Orleans*; *Hybrid*, *Madame d'Arbly* and *The Garland*; *Boursault*, *Inermis*, *Amedis* or *Ortmann*, and *Gracilis*; *Multi-flora*, *Laura Davoust*, *Tricolor*, *Purpurea*, and *Russelliana*. South aspect: *Aristolochia sipho*; *Lonicera atro-rotundata*, *fragrantissima*, and *brachy-poda*; also evergreen *Honeysuckle*; *Eugenia Ugni*; *Wistaria sinensis* and its variety alba; *Pasiflora cuneata* and *grandiflora*; *Periploca græca*; *Magnolia grandiflora*; *Jasminum Wallisii*; *Hypericum nepesense*; *Ecballium pterocladon* and *montevideense*; *Ligustrum japonicum*; *Ceanothus intermedius*, *auratus*, and *hybridus*; *Bignonia radicans* major and *grandiflora*; *Benkian Rose*, *Jame vil*, *Fortuniana* (white and yellow), and *Jaume serin*; *Noisetia*, *Jaume Despreux*, *Cloth of Gold*, *Solferino* or *Augusta*, *Triomphe de Bolwyler*, *Ophirie*, and *Lamarque*.

MAURANDIA BARCLAYANA WINTERING (An Amateur).—We fear this creeper would not bear the rigours of an ordinary winter in the West. Hiding of Yorkshire if matted up. If you mat it up, covering with a good thickness of straw, and then with *Rumex* mats sufficient to prevent frost penetrating, there is no doubt that it might be kept over winter as you propose. We have no experience in the matter, and are content to take cuttings in autumn, keeping these over the winter in a cool greenhouse, and letting the old plants take their chance. Why not try to keep it over the winter matted up? and so settle a question in horticulture for yourself. If you do, and succeed, we shall be glad to hear of it.

HYACINTHS IN WATER (F. G. C.).—You placed the Hyacinths too early in the glasses, October being quite early enough, and the bulbs themselves might not be over sound at the base to begin with. Too much care cannot be taken in selecting bulbs that are sound, and it is a point requiring some judgment and experience. When Hyacinths are placed in water early they remain too long inactive, or are liable to rot at the base, the main point being to secure a speedy protrusion of roots after the bulbs are placed in the glasses; for if they remain any length of time over water in a dormant state the base must rot, from the moisture at that part. It is best, therefore, not to place them in water until October, when we may calculate on a speedy growth. The grubs in the water are probably the larvae of the gnat which is plentiful in most soft-water tanks. It is not likely that they would be able to leave the water and go on to the bulb unless it touched the water, when they might, and they would then do irreparable mischief. If you strain the water through a piece of muslin you may keep such insects out of the glasses. We know of nothing that will kill them and yet be harmless to vegetable life. Having changed the water, place a piece of charcoal at the bottom of the glasses, and place them in a dry cupboard.

CONSTRUCTING A PIT (F. T. C.).—You may do as you propose, but you will act wisely if you dispense with your holes in the wall (pigeon hole wall), and build it solid. This will enable you to dispense with any very secure platform of boards, &c., and the more open the boards, &c., are, the better will the heat rise. With your holes in the wall there would be danger of steam, and moisture, and damp from the dung. In severe weather you would have to pack up to the top of the frame or pit with litter, or tie straw against it. You will find such a place answer well also for hardening off. All that is necessary, provided there should be a little heat against the walls, would merely be giving abundance of air. In most cases where there is not abundance of litter you would find a brick Arnet's stove and some mats the cheapest and best mode. However your plan, but with solid walls, will do admirably. If open-walled your platform must be secure against steam from the dung. The distance of the platform from the glass must depend on the size of the plants. For rather small plants 20 inches would be a good distance. If the pit is deep provision should be made for altering the platform, and the best mode would be to have two-inch ledges of brick formed inside in building, say at 20 and 30 inches from the glass.

FAILURE OF BLACK FRONTIGNAN GRAPE (F. F.).—Your Black Frontignan would be improved by placing glass over the border. The White Frontignan would do well grafted on it, and is not liable to shank or shrivel. The Muscat Hamburg will do well inched on the Alicante, and Lady Downes will do as well as the Hamburg and keep rather longer than West's St. Peter's.

VINES FAILED IN POTS (J. O., Bradford).—Unless we saw and knew what the Vines had done we could not say what they would do next year. As they did little good this season they might do well next year if the wood is good and well ripened. If the wood is weak and not firm we could hold out no great prospect of success. When Vines in pots once bear heavily they do little good afterwards. If they bear only moderately, and the wood is moderately strong and firm, the same Vines will produce for years. As you have the plants they would be worth trying. In neither case will it be worth while to place them out of doors, unless in front of a south wall to harden the wood. The pots must be protected. If you want to force early, as soon as the leaves colour the pots might be placed on the north side of a fence to rest the Vines before again exciting them.

WHITE WATER LILY PLANTING (A. K. H.).—The best time is in April when growth is commencing. Take them up carefully with as much of the thick fleshy stem as possible, and if kept some time out of water, pack in damp moss and keep from the drying influences of the atmosphere. The plants cannot be too soon planted in their permanent positions after they are taken out of the water. If the pond bottom consists of mud, or the bottom is a strong loam, nothing will be required but to tie a stone to the root of the plant, and having fastened it firmly drop the whole in the place desired. The depth of water should not be less than 1 foot nor more than 3 feet. If there is no mud and the bottom is gravel, place the plant on the underside of a thick sod, tying it fast with wire, and then drop it into the place desired, taking care to place it with the crown upwards. If the above modes cannot be adopted you may pot the plants in strong loam, fastening them with stones to prevent them rising, and then place pot and all in the water.

ORNAMENTAL BORDER SHRUBS IN POTS (De Foie).—We are promised some notes on this subject, and will publish them forthwith.

BLUE WOOD ANEMONE ROOTS.—A Subscriber would be much obliged by being informed where these can be obtained.

NAMES OF FRUIT.—(J. Rust).—Your Apple is unknown to us. (Mr. Porter).—Pears.—2, Beurré de Capiaumont; 3, Beurré Bosc; 4, Easter Beurré; 5, Beurré d'Arenberg. Others not recognised. (H. B.).—1, Reine des Pays; 2, Boston Russet; 3, Not recognised; 4, Franklin's Golden Pippin; 5, Herefordshire Pearmain; 6, English Codlin; 7, Lady's Finger; 8, Kerry Pippin. (T. S.).—1, Marie Louise; 2, Kerry Pippin; 3, Birmingham Pippin; 4, Bedfordshire Foundling; 5, Early Nonpareil; 6, Vaughan's Pippin; 7, This seedling is a good summer cooking Apple, but is already past. Others not recognised. (G. R. Bigge).—A, Hollandbury; B, Golden Pippin; C, Devonshire Quarrenden; D, Yellow Ingestre; E, Pearn's Pippin. (Fruit-eater).—Pears.—1, Auchan; 2, Gansel's Bergamot; 3, a very small Beurré Clairgeau. Apples.—6, Trumpington; 4, 5, and 7, are alike and unknown; 8, Vaughan's Pippin. Others not recognised. (Jago).—Pears.—1, Quite decayed; 2, Quite rotten; 3, Louise Bonne of Jersey; 4, Gansel's Bergamot; 5, Beurré Diel; 6, Quite decayed. Apples.—1, Kerry Pippin; 2, Dutch Codlin; 3, English Codlin; 4, Winter Codlin; 5, Brookes' 13, Braddick's Nonpareil; 15, Carel's Seedling; 16, French Crab. Others not recognised. (C. R. P.).—1, Margil; 2, Keeping Redstreak. (G. O.).—Your Apple is Pearson's Plate. (G. M.).—Emperor Alexander Apple. (B.).—1, Glou Moreau; 2, Marie Louise; 3, Ne Plus Meuris; 4, Flemish Beauty; 5, Glou Moreau; 6, Napoleon. (J. P., Longford).—1, Beurré Kenne; 3, Napoleon; 4, Louise Bonne of Jersey. (W. A.).—1, Vicar of Winkfield; 2, Easter Beurré; 3, Autumn Pearmain; 4, Blenheim Pippin; 5, Danelow's Seedling; 6, French Crab; 7, Hampshire Yellow; 8, Golden Winter Pearmain; 9, Russet Pearmain; 10, Scarlet Nonpareil. (A Young Pomologist).—1, Cellini; 2, Beauty of Kent; 3, Reine des Pays; 4, Blenheim Pippin; 5, Golden Reinette; 6, Margil; 8, Franklin's Golden Pippin; 9, Cockle Pippin; 10, Golden Noble. (R. C. H.).—Your Grape is Early Malting (see Hogg's "Fruit Manual"), certainly not White Frontignan. It has no Muscat flavour.

NAMES OF PLANTS (A Flintshire Subscriber).—2, Cheilanthes radiata; 3, Pteris longifolia; 4, Asplenium cicutarium; 5 and 7, Adiantum pubescens; 6, Some imperfect Adiantum; 8, Blechnum occidentale. Henslow's "Dictionary of Botanical Terms" is what its name indicates, but it does not translate the names of plants. The "Cottage Gardeners' Dictionary" translates the names. (W. H. M.).—We cannot detect a plant's name from such a dead mashed leaf. Good specimens should be sent.

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

ISLINGTON AGRICULTURAL HALL POULTRY SHOW AND THE BRAHMAS.

I AM not going to inflict on your readers another analysis of the leading shows as to relative entries, but I should like to draw the attention of the advisers of the grand-mother of poultry shows to certain facts, illustrated by the Show just held at the Agricultural Hall.

Thanks to the proceedings of the Crystal Palace authorities, the Show just held has been the first opportunity that has occurred for gauging the various breeds as regards the produce of 1864, and I venture to say that not a few persons who examine the catalogue will be exceedingly surprised, not the least, I suspect, those who have cast on the Brahma the stigma of impurity. What are poultry breeders about, when so many pure breeds are to be found, that such an increasing number should pet this despised race? Could it have been supposed a year or two ago that at the first great chicken show in 1864, Brahmas would have held the position they do?

Setting aside Bantams, the prizes for which were certainly too small, Brahmas enter more largely than any other breed, in proportion to the prizes offered. The Dorking alone approaches them. True, there were ninety-three pens of Game to fifty of Brahmas, but the former had nearly three times the amount of prize money offered, setting aside the much greater facility for making up pens, now generally conceded to Game—viz., that only one lady is exhibited.

Brahma breeders owe a deep debt of gratitude to the authorities at the Agricultural Hall. Through evil report and good report they have befriended the Brahma. They have consistently dealt liberally towards them, more liberally, in fact, than any other schedule-framers, and I think the result must have proved to every one the justice of their deeds. At any rate, they must have this satisfaction, that at no previous show has there ever been an exhibition of Brahma birds equal to that just held. I am not now speaking of the quality, but from the high commendations bestowed, I imagine that was not lacking. All success then, say I, to Islington, and its promoters. Never mind, whether it is the "Poultry Club" or not, the old proverb says that "Handsome is that handsome does," and that Islington has acted handsomely to us despised Brahmas there is no doubt.

I would ask those who malign us to look at the Regu-

lations of the Show. No. 1 runs thus—"The Judges, whom the Poultry Club will select, will be empowered to withhold a prize or prizes for want of merit or competition, but *additional prizes will be given where the entries are numerous and meritorious.*" This blue ribbon of distinction was reserved for Brahmas. I trust Mrs. Birmingham will make a note of it; this, too, at a show, where Dark and Light birds were divided, and a class for pullets added. Judging from the prize list, amongst all the classes for single cocks, there could not have been one with a more severe competition than the Brahma, thirteen entries, eight being named in the prize list.

Then hail to merry Islington,
And to the Poultry C—,
And when they next do hold a Show,
May I be there to see.

—Y. B. A. Z.

[We hope we may meet you there, and that then the classes may be better arranged. May White and Coloured Dorkings be separated, and Polands of all sorts be unmingled.]

GAME FOWLS AT THE ISLINGTON POULTRY SHOW.

As an exhibitor of Game fowls, I attended the Poultry Show at Islington last week, and you may imagine what my surprise was, after devoting almost a year's trouble and expense, and taking great pains to breed chickens in January, to see the following words written in pencil on one of my pens. "Disqualified. Old birds."

I immediately spoke to Mr. Douglas on the subject, and he told me that he had given it as his opinion at the time they were judged, that the birds were chickens of this year, and he still entertained the same opinion about them, but that the Judge would have it to the contrary, and there was no appeal from his judgment. Now, Mr. Editor, after a man like Mr. Douglas (who, I suppose, has been the most successful exhibitor of Game in England), gives it as his unqualified opinion that my birds were bred this year, I do not think the person who judged them could have had much knowledge about a bird, or he never would have indulged in such a strange freak as he did.

My principal object in writing to you is, that you may publish this letter to clear my character from an unjust imputation which has been thrown on it by some one who ought to have known better.

In conclusion I must say, that I think the rules of the Poultry Club have been compiled by the members solely with an idea of pleasing their own fancies. If such were not the case, I do not think we should have seen prizes as thickly distributed to the members as they were.—GEORGE W. RANWELL, Kingston Crescent, Portsea, Hants.

POULTRY SHOWS NORTH AND SOUTH.

THE remark has been made that more poultry shows are held in the north of England than in the south, notwithstanding that the south is more favoured by climate.

I think I can discern the cause. In the north they keep fowls more for eggs. The Rose-combed Everyday-layers are there the favourites; Silver and Golden-pencilled, Golden and Silver Pheasant-marked, Redcaps, and Black and White Everlastings (I object to the name "Hamburgs"), are there admired and exhibited, many of the shows appropriating five or six classes to them, which are eagerly filled by the neighbouring fanciers.

In the south—that is, in Kent, Surrey, Sussex, and Hants—those Everyday-layers are scarcely known; and as the breeders here keep fowls only for rearing chickens, the coloured legs and non-sitting propensity of that sort is directly against their being kept. Yet our southern poultry committees are so blind to their own interest, or so ignorant of the poultry fancy, that they still reserve four or more classes for those north-country breeds, while all the southern varieties must compete in one class. This is, in my opinion, the cause of the failure of poultry exhibitions in this part of England. As for Shows, we have the Islington, the Tunbridge Wells, the Brighton, and the Maidstone. The

Rose-combed Everyday-layers for the north, the Spanish, Shanghais, and Brahmas for such places as Birmingham and Liverpool, and Game for all England; but for the home counties the varieties of the Dorking, or Surrey and Sussex fowls, are the birds for exhibition.

I have just returned from the Agricultural Exhibition at Tunbridge Wells, where I was forcibly reminded of the above fact. There the Dorkings, though they had only one class, yet made half the exhibition; while the four classes of Rose-combed Everlastings (*alias* Hamburgs), had not many more entries than classes; Cochins and Brahmas no entries.

Can anything be plainer than that if the southern committees wish their poultry shows to be a success they must, like the northern managers, patronise their local breeds? Let them give the Dorkings five or six classes—namely, White Dorkings, Cuckoo, Grey, Speckled, and any other coloured; then, as the neighbouring breeders find these varieties patronised, they will join in the exhibition, and instead of regarding it (as the many now do), as a sort of rare show, they will in a year or two become interested supporters. I beg to request the committees of our southern shows to consider this question for another year; for I am sorry to say that even the London Show does not give the Dorkings a fair chance, for there only two classes are offered for all varieties, the White and Silver-Greys being mixed in one. Is this fair? I repeat the Dorkings should have five classes—1, White; 2, Silver-Grey; 3, Cuckoo; 4, Speckled; and 5, Other colours; then, and not till then, will they have justice done them.

I have been referring more particularly to the southern shows. I do not wish it to be supposed that I desire the Rose-comb Everlasting layers to have less respect shown them; but I contend that in this part of England Dorkings are entitled to an equal if not a larger amount of encouragement.

It is all very well to divide the Brahmas into Dark and Light (though they are only varieties of Shanghais), yet would it not be better to separate the Spanish into Black, White, and Blue?—B. P. BRENT, Dallington, Sussex.

ERRORS IN THE ISLINGTON PRIZE LIST.

I SEE you have an error in the prize list of the Islington Show. You have it the same as it is in the official prize list, which is incorrect I should fancy—viz., Class 14, Brown Reds, Mr. Fletcher first, second, and third, whereas he only showed two pens, numbered 201 first prize, 202 third prize. Mr. Dyas showed pen 195, to which is awarded second prize. Also in Class 15, Duckwing Greys and Blues, you have it Mr. Aykroyd first, which is right, and Mr. Mathews second and commended, whereas he only showed one pen in that class; the second prize was numbered 208, which belonged to Mr. Everard; third, Mr. Fletcher, which is right. Now you will stop a good deal of dubious feeling if you will inquire into the matter, and put it right in your next Number.

—THOMAS J. SMITH.

P.S.—You do not give the names of the Judges.

[We corrected one error, the name in the prize list being "Rose" instead of "Pease;" and we are requested to correct another—viz., the second-prize single Spanish cock belonged to Mr. W. R. Bull, not Bell. We have no means of ascertaining now whether our correspondent is correct in what he concludes. We did not publish the names of the Judges because they were not officially announced, but we heard that Mr. Teebay judged the Spanish, Brahmas, and Cochinchinas; Mr. Dixon, Polands and Hamburgs; Mr. Challoner, Game and Game Bantams. Who the other classes were judged by we did not hear.]

BRAHMA POOTRAS AT THE ISLINGTON SHOW.

THE wise policy of the Islington authorities in dividing the Brahma class has been signally justified by the result. The Brahmas ranked among the five most numerous breeds at the late Show; they equalled the combined muster of the four varieties of Hamburg fowls, more than doubled the Spanish, and were just six times as numerous as the Poles. The new class of Light Brahmas exceeded in its numbers

thirty-two out of the fifty classes of poultry, &c., which formed the Show; and among the classes numerically inferior to the Light Brahmas were the four Hamburg varieties, and all the Game classes except the Reds. In single cocks the Brahmas stood second in number, being surpassed only by the Game Bantams. These figures are encouraging as to the future of the Brahmas; for if, at the first Show which recognises their right to division, they make so creditable a muster, we may fairly count upon increased numbers at future shows, when the ranks of the Light variety will be swelled by the birds of those breeders who, discontinuing to keep a breed so strangely ignored, will gladly return to their old favourites, now that justice is done to them.—**BRABMA POOTRA.**

SILVER-BUFF COCHIN-CHINA FOWLS.

In your report of the Uttoxeter Show you say in your remarks about Cochins, "Mr. Stretch here exhibited a most excellent pen for size and general characteristics, but of feather most difficult to describe." The description of birds alluded to I have occasionally exhibited for several years, and although I have seen them frequently described in your columns as "Silver-Cinnamon," I have always considered it a wrong designation; for, according to written authorities, a cinnamon in Cochins is a reddish brown, or the colour of wetted cinnamon, and the Silver variety has a cinnamon hackle, and the body colour a sort of French white, or the same mottled with cinnamon. Now, the birds in question differ from the above, having a golden-coloured hackle, both cocks and hens. The former have a buff ground colour, most of the feathers edged with a silvery colour on the side of the wings and backs; and the latter, the body colour more or less of a neutral buff. I have usually called them "Silver-Buffs," and I think that is the correct designation; for as there are Cinnamons and Silver-Cinnamon varieties so called, why not one of Buffs and another of Silver-Buffs?—**THOMAS STRETCH, Ormskirk.**

["Silver-Buffs" we think is a good distinctive name for these birds.]

HEDGEHOGS.

THE man who has the care of my cows informed me, to-day, that some milk had been taken from one of them at night. From the moist state of the teat sucked he attributed the loss to a hedgehog. Is it a fact that hedgehogs have milked cows at pasture, or is it merely a vulgar error?—**J. J. T.**

[All good authorities decide that it is an error to suppose that the hedgehog sucks the cow when she is lying down at pasture. If your cow had any milk taken from her, we should conclude, without any hesitation, that it was by a hand.]

BEEES AND THEIR MANAGEMENT.

AN increased interest has recently been excited, which is not likely to abate, in the propagation and preservation of an insect whose instincts and labours clearly indicate that it was intended for human appropriation and benefit; and, although a new branch of commerce has not been opened, an impulse has been given to an old and neglected one, which, in its aggregate results, may assume the character of a tributary stream to the wide current of our national prosperity. Let a comparison be instituted, first, between the quantity of honey of foreign import and of home production; and, secondly, between that which is and that which might be obtained from ample resources within our reach, and the result will show that we are sending abroad for the very article which abounds in our own rural districts, and lies at our very doors ungathered. The extent of bee farms,—of floral acreage, still unstocked, vastly exceeds that which is turned to any profitable account.

These considerations have an important financial bearing, and point to a source of income which has not yet found its way into the tax-gatherer's schedules, and can be assessed only at the rate of ordinary skill and patient perseverance. Let those who can, keep bees. Of course a given extent of

country can only maintain a certain number of hives. If I may hazard a conjecture, I should say that for every 100 acres throughout our midland district we might apportion two hives. This is merely a rough guess, and probably below the mark. This estimate, I am convinced, is on the safe side. If I were asked for absolute data on which to base an opinion, my estimate would assume this shape:—For capital invested take each stock-hive at £1 value, then £20 would be the amount of capital required for a bee-farm of 1000 acres. Taking the average of good and bad honey seasons, we may assume, and that quite within the mark, that each hive will yield, one year with another, 10 lbs. of honey. Reckoning the value of this at 1s. a pound, we have £10 sterling as the interest of a capital of £20, a return of exactly 50 per cent.

If I am, as I believe to be the case, within the mark, what can be a better or safer investment than a few full bee-hives? Our cousins across the Atlantic—Heaven help them to their senses and the pursuits of peace!—keenly appreciate the value of an apiary, and know how to manage it. We are indebted to them for some new forms of hive-construction, which promise to be of great utility, and in the science, no less than the practice of bee-farming, they are, I suspect, in advance of ourselves.

Let me now proceed to the discussion of a few facts and suggestions culled from the mass of correspondence with which I have been almost overwhelmed:—First, as to the best aspect for an apiary. Get as much unobstructed sunshine as possible from the S.E. to W., and as much shelter as you can obtain from every other point. The intervention of a low wall or fence as a screen from the S.W. prevalent wind will be an advantage, provided it does not interfere with sunshine from that quarter.

I have a range of open hives with a S.E. aspect, sheltered and shaded from every other point but that included between S.E. and S.W., while my apiary has an aspect which embraces the points from S.S.E. to W.

The open hives receive the sunshine first, and part with it soonest. The effect is curious and instructive. The bees in the open hives are the soonest on the alert; those in the apiary continue their work the longest. With respect to the quantity of honey collected in a given time, I cannot note any difference. In Holland it is said that bee-hives are generally placed with a north aspect, in which they thrive remarkably well (*Vide COTTAGE GARDENER*, vol. v., p. 76).

I have not sufficient confidence in the result to try the experiment myself, nor do I know of any one who has. I do not like hives to be enclosed in bee-houses; they are better, in my opinion, exposed to the free currents of the external atmosphere. A warm blanket of stagnant air often proves a wet one. Bees will bear the lowest winter temperature unhurt, but a moist hygrometric condition is fatal. A sudden increase of atmospheric temperature causes a deposition of moisture within a bee-house, which affects the health of these insects more than anything else. Place the hives in an open shed, the darker the better in winter, and let the wind blow around them.

Secondly, as to swarming, my advice is to learn its indications, which have been described in the *Times*, and may be read in any manual of bee-keeping. See, if possible, a swarm hived, and remember that the object is to secure the queen. I have found that, as a rule, it is only in very warm weather that bees invariably hang out. I have mostly (this May was a partial exception) no other warning than a sudden cessation from their work, the bees spreading themselves in numbers of forty or fifty on the alighting-board an hour or two before the queen comes out. When the nights are cold, and the hives are full, the great increase of temperature in the interior shows itself in a long broad streak of deposited moisture at the opening of the hive, commonly called sweating. When this is seen keep a sharp look-out on the morrow, if fine, from 10 A.M. to 2 P.M. If the bees be perceived holding intercourse with their "antennae" in groups of ten or twelve on the front board, and labour slackens, you may expect a swarm.

I have frequently seen a swarm on the point of taking a flight kept back by the passage of a cloud across the sun. When the anxious moment comes, and the melodious and unmistakable hum of 15,000 or 20,000 bees proclaims them on the wing, let the watcher retire to a respectful distance,

especially keep children, in fact all but experts, out of harm's way, for if the queen, in a fit of perversity or weakness, were to alight on the head of even an experienced bee-keeper the swarm might be hived, but it would be at the very imminent peril of human life. When they have all settled, and are quiet, hive them according to the best experience or directions obtainable.

But thirdly, hiving is not always an easy matter. Bees will not always go where you wish them, frequently where you least expect them. This is a point to be considered in the establishment of an apiary. The first step in this, as in other things, is the most important. The best locality, at least one which in my case has proved most satisfactory, is the sheltered corner of a kitchen garden, with rows of currant trees in front. The majority, by far, of my swarms have alighted on currant trees, although some have selected raspberry trees in preference, and they have not unfrequently settled on the part where the canes are secured to the stakes. In this case the greatest care is required in handling the swarm, lest the queen should be crushed. The only thing to be done is either to cut through the canes below the bees, and bending the stake over the hive, to give it a sharp rap, and thus house the swarm; or, as I have mostly done, to cut out only a few of the canes, so as to make an opening through which the bees are precipitated when dislodged. A knowing hand will always mark where the bees first begin to cluster, and will take especial care to get that part of the swarm hived first, well aware that the queen is there, and that, if secured, the rest of the bees will be sure to follow. It is a great point with me to ascertain this, if possible, and I have on two or three occasions found it of immense advantage to do so. Two years ago I had a large swarm alight on the thick stem of a large plum tree, where the shaking principle could not be brought to bear. There was, of course, no grape-like pendant clustering. The stem was bandaged with a large thick poultice of winged life. I knew whereabouts in the mass her apian majesty was located, and, with a housemaid's dusting brush, I had little difficulty in getting her into my power, and then at my leisure swept the remaining bees from the stem to the sheet, on which the hive was placed beneath the tree. I once had a swarm drop in the centre of a thick and tangled row of peas, and, instead of clustering into a compact mass, the bees spread themselves over a space bordering upon 15 or 16 inches square. I did not see where the queen alighted, and failed in my first attempt to hive her. Fortunately, however, I noticed a small cluster of bees on the ground, and on separating them found the queen. Taking her gently up between my finger and thumb, I placed her under the hive, and the swarm was secured.—WILLIAM LAW, *Marston Trussell Rectory, Theddington, Rugby.*

(To be continued.)

DARK-COLOURED HONEY—BEE FOOD— WOODBURY FRAME-HIVES.

I SEE in THE JOURNAL OF HORTICULTURE for last week, this answer to a correspondent. "The dark colour of your honey this year is owing to some peculiarity of the season and its effects upon the pasturage." Now, I dare hardly venture to have an opinion contrary to that of the Editors of the Journal, but I had made up my mind that the dark colour was owing to the honeydew. I never remember so much as there has been during the latter part of this summer—viz., the last week or so of July and the whole of August. Now, I found that the storing of dark honey was coincident with these honeydews, and this autumn, when removing supers, it was quite curious to observe how plainly and distinctly you could mark the change from the purest white to this dark honey. All that I have taken since August has not only the colour, but also the flavour, of coarse brown sugar syrup, and I have handed over some 15 lbs. or so to the nursery and kitchen, where it is appreciated.

Secondly, I see a letter in the same Number headed, "Are Bees Omnivorous?" I know nothing on this point of my own knowledge, but I feel sure that I remember hearing my brother-in-law say some years ago, before I kept bees, or took any interest in them, that he often fed his on chicken bones from the table, and occasionally gave them a black-bird, but lest I should have dreamt it, I have written to him

to ask particulars, and as he is very accurate and a good observer, I shall be fully satisfied with his reply, which I will forward to you if you desire it. And now I would ask a question. Three years ago I procured a Woodbury bar-hive, which has been most satisfactory in all respects. Two years ago I obtained a Woodbury bar-frame hive, and each year the frames have got a little out of the perpendicular as soon as the bees began to work, and thus scarcely any of the combs are true, and many are joined together so that the frames are useless. I do not wish to break up this stock this autumn. Can I, now or next spring, take out each bar and prune and straighten the combs, and then how can I keep them straight?

Query 2. Is the borage, so much recommended as bee food, the common rough-leaved blue borage? If so, where can the seed be obtained, and would it answer to sow some quarter of an acre of poor land with it?—A. W. B.

[You may very probably be right in connecting the collection of dark-coloured honey with the existence of honeydew, but we do not deem this opinion contrary to our own. Honeydews do not always produce thick dark-coloured honey, and its very general appearance this summer we still believe to be owing to some peculiarity in the season and its effects upon the pasturage.]

We shall be glad of any evidence with regard to the carnivorous propensities attributed to bees.

Every Woodbury frame-hive either is, or should be, furnished with a notched bar fitted transversely at the bottom of the hive. Each frame drops into its appropriate notch, and is in this way kept perfectly steady and perpendicular until filled with comb. When this has been accomplished the notched bar had better be removed as the weight of the combs renders its presence unnecessary, and it would be a hindrance to their free manipulation. During any warm day in either April or May the combs may readily be set straight; and if kept in their proper position by clips formed of tin or sheet zinc, strips of wood, wire, or other temporary supports, they will in twenty-four hours be so firmly fixed by the bees that all extraneous appliances may be safely removed.

The plant referred to is the common blue borage. The seed may be procured of any seedsman, and, once sown, it will probably increase and multiply fast enough.]

JOINING LIGURIAN QUEENS AND BEES TO BLACK BEES.

I OBSERVE in some of your last Numbers that you seem to doubt the joining of Ligurian and black bees together. I have lately joined four hives, first taking the black queen away, and without the least fighting. This I have done by fumigation, joining during the time they are fumigated. I do not observe any of your apiarists have hit upon a sure plan of joining Ligurian queens to black bees; but I have joined several by fumigation, taking the black queens away first; or, if they are in frame-hives, it saves a great deal of trouble to first take away the black queen, and when the bees have settled in the evening, to fumigate them, and then join the queen, which need not be fumigated. Care is required after fumigation that they be shut in until they recover, and plenty of air (warm, not cold) given, and that they be let out next morning. By this plan you may join three or four hives together.—A. W.

FOUL BROOD IN YORKSHIRE.

ON perusing Mr. Woodbury's reply, that the sample of comb sent from my hive "was unquestionably foul brood," and that he "never saw any presenting a worse appearance," I felt that, at this late season of the year, it would be the wisest course to take his advice, and destroy both my infected colonies.

I did not, however, like the opportunity of trying the cure of this fell disease to pass away, and, therefore, determined on making the attempt. I should say that both the diseased stocks are Ligurians (though in the older one the breed is not so pure), and that they were both in Woodbury frame-hives.

I first removed the queen from each hive, and then pro-

ceeded to drive the bees out. I do not know whether it is the experience of others, but I found, as I have before done, that "driving" bees from boxes is very "slow," and after drumming for about ten minutes with very small results, proceeded to brush the bees from the combs with a feather into an empty hive, and, putting them on their stand, they all went in at night, when I fastened them up.

I found eggs and brood in all stages in both the stocks. The next day I united the bees, making use of syrup flavoured with peppermint, and put them into a probationary box having two sides of glass, sufficient ventilation being secured by the bottom being made of one piece of perforated zinc, and by large openings in the top board covered with slides of the same material.

The total nett weight of bees was a little more than 2½ lbs. I should be glad if you or any of your correspondents would say what is about the weight of bees in a strong stock at this season. My own idea is, that with the killing of the drones, and the great numbers that die and are destroyed in various ways without being to any great extent replaced by brood, that few stocks would have more than half the weight of bees that they had three months ago.

Placing the best queen with about fifty workers under a ball-glass at the top, I kept the bees confined for six days, giving them the queen on the fifth day without much difficulty. During the whole time the bulk of the bees hung in a cluster beneath the queen, lengthening to the bottom in the daytime and contracting into a small space at night. On once changing the position of the queen at the top, the cluster below very shortly followed. Although I could not well have given more ventilation, the excitement in the daytime once or twice sent the thermometer up to 90°. I fed them with a little syrup each day, and they made one small comb, about 12 square inches. Nearly a hundred bees died each day: in all I counted rather more than five hundred dead ones.

Thinking that there would be less danger of failure if I gave them a winter's stock of sealed honey, and a friend having proposed to drive the bees from one of his straw hives, I was glad to avail myself of this for the purpose.

On driving the bees from this stock we were surprised to find not more than ½ lb. of them, no queen, and several drones; the hive contained 16 or 17 lbs. of honey. It is rather remarkable that this handful of queenless bees should have managed to guard their stores, being close to several strong stocks which have proved themselves adepts at robbing. There was no brood, and the combs appeared perfectly healthy. Into this hive I drove my poor imprisoned bees, and took them to a friend's garden two miles off, and where no bees are kept. Here they will remain till spring, when I propose to cut out the combs, and if I find them free from disease to transfer them to a frame-hive. If, unhappily, otherwise, they will, I think, be consigned to destruction. In this case I shall feel at least somewhat repaid by having proved to my own satisfaction that it is well nigh useless to attempt the cure of foul brood at this season of the year. In either case I intend to inform you of the result.—C. D., *Sheffield*.

FOUL BROOD, AND WHAT HAS BEEN WRITTEN ABOUT IT.

We are all exceedingly obliged to "R. S." for experimenting on foul brood, as well as for his kindness in making public the result of his experiments. It is, of course, pleasing to me to find those statements confirmed, which it is now needless to say were not only free from exaggeration, but were penned in sad and sober earnest, and without even the slightest intention of astonishing apiarians generally.

I may remark that "R. S." is the "valued correspondent in the north," to whom I alluded in page 403 of the fifth volume of *THE JOURNAL OF HORTICULTURE*, and that I am informed by him that all his observations and experiments have gone to establish all that I have stated regarding the infectious character of the disease.

Since concluding in page 446 of the last volume of *THE JOURNAL OF HORTICULTURE* the series of papers under the title which heads this article, my attention has been drawn to the fact that in Bonner's "Bee-Master's Companion,"

published at Berwick in 1789, foul brood is accurately described, a whole chapter being devoted to it under the title of "An uncommon disaster, which sometimes, though rarely, happens bees," and in which he says—"I shall here narrate a very strange disaster which happened to four of my hives last spring; which, for the singularity of it, I hope the reader will excuse me for relating here. In the latter end of March I had four hives that had but few bees in them, and also but very little honey, and consequently, could neither have defended themselves from robbers nor famine. To put them in a way of defence from both, I supplied every hive with a sufficiency of honey to bring her to June, and also after two days reinforced her with bees to defend her from robbers; after, in the first week of April, I took the four hives a mile from my own apiary, and placed them in a sunny, quiet place among whins which were beginning to bloom, and near some willow trees, whose palms were out, so that when the weather was fine they had food at their door without the trouble of much travel. . . . As soon as they were well set down among the whins the weather turned very good, and my four mended hives fell briskly to work and wrought throng for twelve days of fine weather." Bad and cold weather then set in, but in due time "good and pleasant weather comes round again, and my strong hives fell briskly to work; whilst scarcely a bee was to be seen at the entry of any of my mended hives. I was surprised at it, as knowing it was neither for want of bees nor honey. I then turned them up, and by looking down between the combs, I saw plainly that the young were all going backward in the cells. I waited other eight days, and none of the bees ever carried any at all, while my strong ones carried throng. I then turned them up again, and cut out a large piece of comb with maggots in it, and found every one of them dead, and going backward in the cells; as it was such a case as I was perfectly a stranger to, I could not know the cause how it happened, neither did I presently know what method to take with them next. I conjectured that every hive having got so many bees, and so much honey added to them; at the same time placed in the midst of good pasture, to which the sun added his comfortable presence, all which completed their happiness, and set them a-thinking summer was at hand, and now they should set to prepare for it, by hatching forward a numerous brood, which they accordingly had done, and had a vast number in their cells, considering the season of the year, and the short time they had; and also their number was not very great, although they had a moderate quantity. I also conjectured that as the queen had been made prolific by the heat in the hive, to lay great quantities of eggs, the bees had also to go off in large quantities a-foraging among the flowers for fresh farina to seal the maggots up in their cells with, and when so many were abroad, the few that remained at home could not keep a sufficient heat in the hive to nourish up so large a brood." Blaming "excessive cold" as the cause of his disaster, Bonner "waited till the beginning of June, and the bees turned very few, the old ones dying of age, and few or none to supply them; they decreased very fast from the time of the disaster to the beginning of June, they carried loads, and bred some, but very little. When I turned them up in May and June, and looked down between the combs, I was unable to do it for the stench that the rotten maggots produced. I then saw plainly that they never were to turn to any account the way they were presently in; for though they were beginning to tear out some of the consumed maggots, and lay eggs in their place, and increase a little, the season was going away fast, and, consequently, they would be of little value at the end of summer. . . . I then immediately proceeded and took all the bees out of one of the hives, and put in an empty one. I next took all the bees (which were very numerous) out of one of the strong hives which . . . was standing beside the mended ones, and put in another empty hive also. I then set down both the hives containing the bees in the very spot where they stood when in possession of their own hives, in order that they might keep their old stance, and then I took the hive containing the stinking maggots, and with an instrument made on purpose, cut out all the pieces of combs containing the stinking maggots, among which were two hundred young bees coming forward in some of the cells which the bees had cleaned out; but I

paid no regard to them, but cast them into my empty comb-barrel, that the cells might be made into wax the next time I made that commodity. After that I took the numerous bees which I had taken out of the strong hive, and put in the hive which I cut the combs out of, and set the bees exactly where they stood when in possession of their own hive, and they being numerous, soon filled her full of combs again. I then took the heavy hive which was almost full of maggots in the cells, and had also, I judged, 10 lbs. of honey in her. I then took the few bees which came out of the stinking hive and put in her, and set her down in the place where the few bees stood before, and covered her well, and gave her a very little entry, in order to keep her warm to hatch out the young, and in ten days time she hatched out a most numerous brood, and they were both thriving hives. I did exactly the same with the other three stinking hives, and changed their bees with three of their strong neighbouring hives, and they all did well, and gave me satisfaction, which I esteemed an excellent cure for so desperate a case."

An excellent cure, indeed, provided it were permanent, which my experience of foul brood leads me very much to doubt, especially as in a subsequent work published in 1795, our author again refers to the disease, but this time in a manner which appears to indicate that he had found it by no means so "rare" as he had previously imagined. Whatever may be thought of the means by which he attempts its cure, and the reason he assigns for its outbreak, there can be no doubt of its identity with foul brood; and as this is the earliest and best description of that disease which I have met with in any British author, I have been tempted to quote at some length from what is now a rather scarce book.—A DEVONSHIRE BEE-KEEPER.

BEES' WORKING HOURS.

WOULD some of your correspondents state the hour that bees go out foraging in the morning? as I observe in your Journal it is stated that they do not go out before 8 A.M., whereas I saw some of mine out at seven this morning, September 29th, and it was cold too. They were on the borage. I have seen bees out at half-past 6 A.M. frequently, and this last season had swarms at 8.30 A.M.—J. ELMO.

[Bees commence work early or late according to the season, and the prevailing temperature; but the strength of the colony has great influence, as it is by no means unusual to find the bees of a strong and flourishing stock on the wing long before the inhabitants of a neighbouring but less prosperous hive. We have, however, frequently seen wasps invading even strong colonies at so early an hour that no sentinels were on duty to repel them.]

THE SPIDER AND THE WAX-MOTH.

FROM the days when Virgil sang of bees the spider has been numbered among the enemies of the honey bee. In common with most bee-keepers, I waged relentless warfare against it, until my attention was called to the large numbers of bee moths often found suspended in its webs. From that time I looked upon it with a friendly eye, satisfied that while it feasted upon many an unfortunate bee, it was entitled to the same favourable regard with the insectivorous birds, which claim a share of the fruits their industry has helped to protect. Within the last two years, however, I have found it to my interest to cultivate a still more friendly acquaintance with this detested insect, as I am now able by its help to preserve all my empty combs from the ravages of the bee moth. Let me tell your readers how I came to make so useful a discovery.

Two years ago I placed a small hive, containing an Italian queen, from which I was raising other queens, upon an empty old box-hive, which, being laid on its side, furnished a convenient stand for my nucleus. Putting some frames with the empty combs for a few days in the box-hive, where they were protected from the sun and weather, and were convenient for replacing frames of brood removed from the nucleus, I noticed that a spider soon spun her web among them, and that in a few days she had caught several bee

moths. During the season I used this place as a receptacle for empty combs, and never saw any indication that the bee moths had deposited any eggs amongst them. Last year I used the box in the same way, with similar results. Encouraged by this success, I left early last spring a number of empty combs in hives untenanted by bees, and find them, after repeated examinations, protected by spiders, and as free from the depredations of the larvæ of the bee moth as though they had never been without the protection of the strongest colonies of bees.

Those who have kept pace with the progress of improved bee culture, have long ceased to regard the bee moth as a very formidable enemy to the successful rearing of bees. Populous and well-provisioned stocks suffer only trifling injuries from it, while those that fall a prey to it are usually queenless, or in such a condition as to be worthless without the aid of an experienced bee-keeper. The presence of the bee moth is most to be deplored in the apiaries of the skilful, because of the great difficulty of protecting empty combs from the ravages of its offspring. The use of moveable comb-hives enables the bee-keeper to turn to advantage every piece of good comb taken from colonies which are broken up, or to which any accident has happened, if such combs can be preserved from the only insect known to live upon wax. But if a single female moth gain access to these combs after they are removed from the bees, or if only a few eggs are deposited in them before their removal, the worms, as soon as they hatch, begin to eat the combs, and so rapid is their increase in hot weather, that in a short time such combs are rendered entirely worthless.

Both in Europe and this country many plans have been devised for the safe-keeping of empty combs, but all of them require more time and skill than bee-keepers usually have at their disposal. Once committed, however, to the faithful guardianship of the spider, they may be considered secure, whether placed in empty hives, or in any special depository made easily accessible to these watchful insects. If I found the spiders at all dilatory in taking possession I should put their egg-bags early in the season into the receptacles where I keep my empty combs, or I should capture and introduce some full-grown specimens; but thus far any hive or box placed on the ground, and having sufficient opening, has been tenanted as early in the season as I could wish.—L. L. LANGSTROTH, in *American Country Gentleman*.

OUR LETTER BOX.

PLUMAGE OF BLACK DUCKS (Buff Cochins).—Black Ducks should have no white feathers, but few are without some, and they are more common round the eye than on any other part of the plumage. If they were shown against birds as good in other points, and lacking these defects, they would be beaten. Old birds are far more subject to them than young ones. One or two white feathers may be found in almost every bird of the breed, unless they have been pulled out. If they are in all other respects prize birds, we do not think you would be justified in returning them.

FOWLS WITH SHOT IN THEIR CROPS (Cecili).—There is no cure for the case you mention—that is, there is no way of getting rid of the shots immediately; but unless they are swallowed in large numbers we do not see why they should be fatal. Fowls are tenacious of life. They live with pins in their gizzards. We have taken tin tacks out of them, and we should think that if barley meal were mixed stiff, and they were fed on it, the shots would pass away with it. Fowls will not pick up shots, and such numbers as you mention must have been poured down the throat. They will swallow anything that is put in their mouth if the beak be held closed.

DORKING COCK WITH SWOLLEN FEET (W. B. D. A.).—Your Dorking cock injured his feet in the fight so much, that they are too tender to carry his heavy body. All you can do for him is to put him in some place with one hen where it is very soft grass. Failing that, let him have a small run covered with hay. This is the only chance, as his weight is against him. Feed him liberally—bread and milk, bread and beer, and ground oats.

BLACK BEETLES (Annie).—Have you tried Chase's Beetle Poison? It is said to be very effectual.

LONDON MARKETS.—OCTOBER 10.

POULTRY.

The supply of poultry does not increase, as it mostly does at this season of the year. There is, however, but a small demand, and little consequent variation in price.

Variation in price.											
	s.	d.	s.	d.		s.	d.	s.	d.		
Large Fowls	2	6	to	3	0	Grouse	2	0	to	2	6
Smaller do.....	2	0	"	2	3	Partridges	1	6	"	1	9
Chickens.....	1	6	"	1	9	Turkeys	0	0	"	0	0
Geese	6	0	"	6	6	Pigeons	0	8	"	0	9
Ducks	2	0	"	2	3	Rabbits.....	1	4	"	1	5
Pheasants	2	3	"	2	6	Wild do.	0	8	"	0	9

WEEKLY CALENDAR.

Day of M th		Day of Week.	OCTOBER 18—24, 1864.	Average Temperature near London.			Rain in last 37 years.	Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock after Sun.	Day of Year.
				Day.	Night.	Mean.	Days.	m. h.	m. h.	m. h.	m. h.		m. a.	
18	Tu	St. LUKE.		57.9	41.3	49.6	18	32 af 6	59 af 4	14 7	14 10	18	14 52	292
19	W	Hazel leaves fall.		59.5	39.9	49.7	18	33 6	57 4	8 8	13 11	19	15 3	293
20	Th	Virginia Creeper leafless.		59.1	40.0	49.6	18	35 6	55 4	8 9	after.	20	15 13	294
21	F	Sun's declination 10° 38' S.		58.3	39.6	48.9	16	37 6	53 4	6 10	44 0	21	15 22	295
22	S	Walnut leafless.		58.7	39.1	50.4	21	39 6	51 4	10 11	17 1	22	15 31	296
23	SUN	22 SUNDAY AFTER TRINITY.		58.0	40.4	49.2	20	40 6	49 4	morn.	44 1	23	15 39	297
24	M	Privet berries ripe.		56.2	39.5	47.9	17	42 6	47 4	12 0	8 2	24	15 47	298

From observations taken near London during the last thirty-seven years, the average day temperature of the week is 59.2°, and its night temperature 40.9°. The greatest heat was 73° on the 21st, 1831; and the lowest cold, 17°, on the 23rd, 1859. The greatest fall of rain was 0.96 inch.

From observations taken near London during the last thirty-seven years, the average day temperature of the week is 53.2°, and its night temperature 40.5°. The greatest heat was 75° on the 21st, 1851; and the lowest cold, 17°, on the 23rd, 1859. The greatest fall of rain was 0.96 inch.

ZONALE GERANIUMS AT LINTON PARK.



SOME little time ago I pointed out many of the qualifications which I thought most desirable in the Zonale Geranium for bedding purposes, one being that the foliage ought to be plain and bright green rather than marked with the horseshoe, as a great many really good varieties are. In a subsequent paper Mr. Abbey very properly differs with me on this point, remarking on the many really good varieties that possess the leaf-marking, and the comparatively few kinds without it. This I by no means deny, but, on the contrary, agree in; and the list which I give of the kinds grown and flowered at Linton Park during the past summer proves that the greater number of them exhibit the horseshoe marking. But if we examine every object by the standard of excellence laid down as generally approved of by the most able censors, it will be found that comparatively few things approach that standard, and Geraniums are no exception. Although some of the sections into which I have divided the class of Geraniums here described scarcely offer an example of an entire plain leaf, I am nevertheless in hopes of seeing some of the family assume that more simple garb, and still possess all the attractive features of the best of their section. Once direct the public in the right way, and the caterers for them will on their part furnish what is wanted. The fact of some of the very best bedding Geraniums of the day lacking the black marking of the foliage is a proof that a good flower may be produced as well by a plain-leaved plant as by a zoned one. For instance: Tom Thumb and Crystal Palace Scarlet have both plain leaves, to which may be added Punch, Christine, Trentham Rose, and some others; and the markings of Stella and Magenta are faint, and might disappear entirely in another generation, and no one would wish to see these varieties changed for horseshoe-leaved ones. I am far from denying all merit in the latter class; on the contrary, in plants for a greenhouse, or where immediately under the eye of the spectator, a well-defined zone of one or more colours on the leaf, clearly and distinctly formed, is an additional attraction to some kinds; but in the flower-bed that is to be admired at the distance of, perhaps, 50 yards or more, the less of the marking the better. Fancy Geranium Christine with a deep band of black on the foliage, and see how it would damage the rich tint of the flower! Why, it is as much the foliage as the flower that gives Christine pre-eminence over Kingsbury Pet as an old variety and Eve as a new one, both being marked in the foliage; while the white and flesh-coloured ones seem to suffer more from the confu-

sion that the two colours on the foliage create than the other sections do. I may also mention that I dislike a white eye in a scarlet Geranium as it weakens the colour; the other qualifications are so well known as to require no further comment here.

The past season has in some respects differed from former years in the well or ill doing of certain kinds of Geraniums. In the garden here the dry weather had the effect of dwarfing many of the rank growers, and inducing a profusion of bloom such as they never before exhibited, while the dwarf sorts were dwarfed still more, the individual blooms—for instance, those of Little David and Brilliant—being very small. The season throughout must, however, be regarded as having been favourable to the Geranium, and with the exception of Cloth of Gold and one or two others all have done well. I would suggest to those who make it their duty to furnish new kinds to try the yet unexplored tract, leading from the deepest crimson or purple we now possess to a still higher or deeper tint of the same colour; scarlets, rubies, pinks, flesh colour, and whites are plentiful enough and to spare, but little has yet been done in the direction I point out. The Nosegay class seems to offer the best medium for producing what is wanted in that way; but along with it must march a section of the more compact form of the most approved of the Zonale-leaved kinds. The Silver-edged varieties require but little amendment, but the Golden ones much. To these, however, I will advert on another occasion.

In dividing the list into the following sections I by no means aver that the lines of distinction between each are clearly defined; on the contrary, they blend into each other; but as near an approach to accuracy as possible has been aimed at. The varieties named are both old and new, and though not numerous, I prefer giving only those grown here; but I should like other growers to furnish a list likewise, so that we might compare notes. Many really good kinds have only a local reputation, but with the advantages of a publication like THE JOURNAL OF HORTICULTURE there is no reason why they should not be better known; and I shall be glad to hear further remarks or criticisms on this interesting subject.

CLASS 1.—Zonale Geraniums with white flowers; foliage plain or horseshoe-marked.

Ethel.—Upright grower, vigorous; horseshoe marking medium; flowering trusses good and tolerably abundant. It flowers also very well as a potted plant.

Snowflake.—Dwarfer in habit than the last named, which, however, it much resembles in other respects; its flowers may possibly be a shade whiter, but it falls short of the qualities its name implies.

White Tom Thumb.—I fear that this may not be correct, as the foliage has a clear and rather dark marking, which its namesake has not. It is, however, a good variety in its class, flowering more freely than some others.

Madame Vaucher.—Strong grower, having the foliage distinctly marked; flower-truss good when the blooms are all expanded at once, which, however, is not so often the case in this class as in those of darker colours. I believe this is the best known of all the Whites, and it has many admirers.

Purity.—Foliage slightly horseshoe-marked; habit good; but flowers no improvement on Ethel.

Miriam.—Foliage slightly marked with horseshoe; habit upright and rather loose; flowers no improvement on older kinds. It may possibly be better as a pot plant.

Virgo Marie.—Foliage darker marked than the last, which it excels in most respects. Possibly it may become one of the most popular of its class, but I believe it is not very plentiful yet.

White Nosegay.—I received this under the name of *Mini-mum Nosegay*, but find the latter name is applied to a crimson one of the same habit. *White Nosegay*, however, has little to recommend it beyond being very dwarf; the flowers are a dull pale flesh colour rather than a clear white; it blooms abundantly, however, and may be useful as an edging.

White Ivy-leaf.—This, like the last, is far from a clear white, but, taking all its qualities into consideration, it deserves a place in every collection; even those who discard the ordinary *White-flowered* class admire this kind. It is liable to run into a pale pink or flesh colour.

CLASS 2.—Flowers flesh-coloured or pale pink; foliage either plain or horseshoe-marked.

Maiden's Blush.—Foliage slightly horseshoe-marked; habit strong, rather upright; trusses good and pretty abundant. It is one of the best of its class for beds, the uniform colouring of its petals appearing better in mass than the two-coloured kinds mentioned beneath, which, however, have their merits as pot plants.

François Desbois.—Much like the last, only the horseshoe marking is darker, and the habit a trifle more spreading; the colour of the bloom is alike in both.

Diadem.—Foliage with a rather dark horseshoe marking; habit good; flower with a pink centre, and outer limb of petal white or nearly so, giving the combination of the two colours a fleshy tint. As an ornament for the plant-house I expect this and the following will be favourites; but for bedding purposes, as stated above, I prefer the single to the two-coloured varieties.

Eugénie Mésard.—Dark horseshoe marking; habit more dwarf than the last; flowers much the same, the outer edge of the petal being paler than the centre, and on that account looking as if it were bleached with the sun. As an in-door plant it may, however, be useful.

Eve.—Strong upright grower; horseshoe marking; flower a little more pink than the above. I have not sufficiently tried this to be able to state with certainty how it will turn out.

Madame Rudersdorf.—Somewhat like *Diadem*, with, perhaps, a shade more colour, and foliage somewhat less deeply marked with the horseshoe. Like the last, I have not tried it in sufficient quantity to be able to say with certainty how it will turn out.

Lisette.—Foliage somewhat downy, scarcely any marking; habit compact and good; flowers produced freely, but, like those of most of its class, liable to be damaged with the rain or sun.

CLASS 3.—Flowers pink.

Christine.—This well-known favourite is, perhaps, still the best of its class, its only fault being its tendency to produce seed-pods or spikes in greater abundance than is agreeable; in all other respects there is little to wish for.

Helen Lindsay.—This variety much resembles the last; the flowers may, perhaps, be a shade darker. Not having grown it much I am unable to say more of its merits than that it promises well.

Striking.—This, like some of those in Class 2, is a two-coloured flower, which when seen at a distance looks like a pink. The central part of the flower being darker than the outside, a mixture is produced. By no means unpleasing as a bedder, but still more to be admired as a potted plant. Foliage horseshoe-marked, and habit more robust than that of *Christine*, from which it also differs materially in colour.

Hendersoni.—For some years I had under this name a dwarf variety of the *Lucium roseum* breed, but it has been superseded by *Christine*. There is, however, a variety partaking a little of the *Nosegay* section called *Hendersoni nana* which has its admirers, but unless for some special purpose I could never see any particular merit in it.

Skelloni.—Horseshoe-marked; more upright grower than those I have named; but, on the other hand, the flowers are less showy. It is fast falling into disuse.

Kingsbury Pet.—Better than the last, but in the same strain. It is better as a potted plant than as a bedder.
(To be continued.) J. ROSSON.

DECORATION OF THE FLOWER GARDEN IN WINTER AND SPRING.

GARDENS gay with flowers, and interesting with foliage, are not common at these seasons, nor is that to be wondered at, considering the present rage for polychrome gardens. Quarries contribute their sands and crystals, furnaces their clinkers, and some old building its quota of the elements necessary to form the brick-and-mortar gardens; but all these offer no compensation for the absence of the ever beautiful forms of vegetable life, whether in flower or not.

Any one visiting the gardens at South Kensington during the next six months, will not fail to notice that shrubs will not grow, no one can tell why, and that the polychrome-beds with their varied-coloured earthy substances are not in keeping with the order of a garden in the ensuing two seasons of the year—winter and spring. Such mimic gardens would be more in place as floors to playgrounds, on which are played all kinds of pretty games; but to the horticulturist they are too puerile to afford any amount of lasting gratification.

That there are plants sufficient to render our gardens not only interesting, but beautiful in winter and spring, the spring garden at Cliveden exists as a witness; for there it is questionable whether a finer display of flowers artistically arranged is not attained in April, and onwards to June, than at a more advanced period of the year.

But if we would see anything really worth seeing in the way of flowers during the spring and early summer months, it is not in the gardens of the great that we must look for it, but in those of the good rector over the way, or within the limited area of a cottage garden, where old tried friends have not been discarded to make way for those changeable things that are here to day and gone on the morrow. We cannot leave such places without saying with the poet—

"Full many a flower is born to blush unseen."

And so they are in their native wilds, and it is for man to bring them together so that they may form what we recognise as a garden having its flowers at all seasons, not those which flower in summer only, but those especially

"That come before the swallow darts, and take
The winds of March with beauty."

It is the absence of those plants which tend to enliven the flower garden between the removal and reappearance of the summer occupants of the beds, in addition to the labour and cost attendant on what affords a short display of bloom in summer only; and the anything-but-garden-like appearance of places where the bedding-out of tender plants is indulged in, that has led some to advocate a return to the old herbaceous border, and dependence upon a few showy annuals for the summer and autumn display. It is when there is an absence of plants flowering in spring that we may say of our present style of flower gardening, that it is

"—like the tyrannous breathing of the north,
Shakes all our buds from growing."

That the arrangement of tender plants in beds need not prevent any from enjoying flowers in spring, I hope to be able to show; and I am persuaded I can point out to the brick-and-mortar gardener, that there is no necessity to hunt quarry, coal pit, or furnace for materials wherewith to embellish our gardens during the winter, spring, and early summer months.

First amongst those adapted for rendering a garden interesting in winter, are evergreen shrubs. It is a common supposition that these must be grown in pots, but it was pointed out by the late Mr. Beaton, in Vol. XXII., page 59, that they would bear removal twice annually with greater facility than the summer occupants of beds—that is, they may be removed from the reserve to the places assigned for them in the flower garden in autumn, and again taken up to make room for bedders; the expense of providing suitable

evergreens in pots ready to put in on the removal of the plants in autumn, is therefore done away with. There is no difficulty either in growing them in pots, or removing them twice annually—first in October, and a second time in the latter part of May. It is the same with deciduous shrubs, they will move as well in October to their winter quarters, and in spring after blooming, if care be taken to preserve a ball. There is some difficulty, it is true, at the commencement, but the shrubs take amazingly well to the system after having been removed twice annually for a year or two. Shrubs of all kinds are now cheap, and can be had by the dozen, hundred, or thousand, of a suitable size; and those who intend doing something this winter towards improving the bare appearance of their gardens should set about it at once, and select a sufficiency of shrubs of various heights and shapes, distinct in foliage, both as regards colour and habit. The tallest should not exceed 3 or 4 feet in height; and three sizes or heights should be secured—viz., from 3 to 4 feet, from 2 feet to 2 feet 6 inches, and from 1 foot to 1 foot 6 inches; likewise different forms—i.e., pyramids and bushes, both feathered to the ground, and standards, also such as are naturally of low or prostrate growth.

The following list may serve as a beginning:—

Holly (Ilex), of many kinds, is admirable for the purpose, and though considered difficult of removal, no shrubs move more safely. They may be had of all sizes up to 3 feet, and of pyramidal and bush forms. By removing them so frequently they arrive at an early maturity, and produce berries when very small, and such plants are quite charming for the ornamentation of beds in winter. Besides, removing them twice annually renders the amount of cutting to keep them in shape a question of little import, it being only necessary to stop all growths at the fourth leaf, but only those that grow a-head of their neighbours.

Ilex aquifolium flavum, deep green foliage; *aureo-marginatum* (gold-edged); *senescento-marginatum* (spineless gold); *spino-marginatum* (prickly gold); *croceo-marginatum* (gold-edged, but deep); *medio-pictum* (gold-blotched); *croceo-fuscum* (chimney sweep); *argenteo marginatum* (silver-edged); and its varieties *senescens* (spineless silver); *spinescens* (prickly silver); *latum* (broad-leaved silver); and *medio-argenteum* (silver-blotched). Then we have the small dense-leaved hedgehogs, *ferox* (green-leaved); gold variegated (*ferox aureum*); and silver hedgehog (*ferox argenteum*); the lovely *Handsworthi*, and its variegated variety; *cornuta*, *Tarago*, *Shepherdii*, *maderensis*, and its variety *atrovirens*; and last in my list, but not in merit, the beautiful Weeping Holly (*Ilex aquifolium pendulum*), which is quite charming on a four-foot stem, and so I think will be its variegated variety.

Then we have *Aucuba japonica*, and *A. latimaculata*, which move as freely as Cabbages, and with far more certainty, giving material for a couple of beds of the loveliest kind, the bold, dense, and handsome gold foliage, though green at a distance, yet forming a suitable contrast to that of a deeper hue; and when we have the female *Aucuba* at a price within the reach of all, with its fine berries to set off its handsome foliage to better advantage, we may count on having three of the best shrubs for winter decoration in the *Aucuba*.

Common Laurel affords charming, bold, light green foliage, and when moved frequently it will transplant as safely in the last week in May as in the beginning of October, and as we want to move it at both these times, it is just the sort of plant. Its cousin, the Portugal Laurel, is rather more shy, but we must have it as dwarf bushes to form a centre for a large bed, and we will edge it with *Vinca minor* fol. *aureo-variegata*. We must have our standard Bay trees, too; but as Bay trees are not over-hardy, we will have the Portugal Laurel instead; and having them on four-foot stems, all that is wanting to make people believe that they are Orange trees out of doors in winter, is that the green of the foliage is too deep by half. These placed in the spots usually assigned to Roses by the sides of walks, are far superior to the queen of flowers from October to June. They are very handsome.

Finely contrasting with these are standard Yews, which move like Docks. They will bear comparison with anything that a sunnier clime can send against them, even if left over summer, and dwarf plants of *Taxus baccata* are not amiss

for a distinguished position. The Weeping Yew (*T. Dovastoni*) is never seen to such advantage as when on a stem 4 feet or more high; and when we get its variegated offspring (*aureo-variegata*) on a stem suitable for a standard, we shall be in a way to show admirers things as they ought to be. *Taxus adpressa* or *brevifolia*, when once of a suitable size will last for nearly a generation without any cutting or clipping, and not become too large. We must also have the Irish Yew (*Taxus hibernica*), which always keeps mounting up, and never grows to one side, and its silver and gold variegated varieties.

Of Junipers, *Juniperus Bedfordiana*, *glauca*, *recurva*, *suecica*, and *thurifera*, are not amiss, and moving well, and having fine foliage we must have them. Nor must we overlook *Sabina* (Savin), its variety *tamariscifolia*, and its sub-variety *variegata*, for any of them make nice beds, and will answer for edgings; but a better kind for such a purpose is *prostrata*; while *J. stricta* is the most ornamental of all.

Thuja aurea, than which nothing can be more beautiful in spring with the golden colour it then assumes, and the American, Chinese, and Siberian Arbor Vitæ hold their own in any company with which they are associated. The best form of the Chinese Arbor Vitæ (*Thuja orientalis*), is *compacta*, nothing more than a close-growing variety of the species. *T. Hookeriana*, much resembling *T. aurea*, but more glaucous in appearance, is fine. *T. occidentalis* (American Arbor Vitæ), is one of the best, as it bears clipping well, and makes one of the most beautiful edgings and hedges known. The variegated forms of *T. plicata* and *T. orientalis*, both the silver and gold, are lovely for edgings to any of the species. *T. Wareana* is very fine, and by far the best of the Siberian Arbor Vitæ.

Of *Cupressus*, the most beautiful of all is *Lawsoniana*, forming a bed of the loveliest description; but beautiful as it is, it is as nothing when placed beside its variety, *aureo-variegata*, which is most attractively variegated with gold. *C. Lambertiana* or *macrocarpa* is just passable; and the same may be said of *McNabiana* and *Goveniana*. *C. cashmeriana* is a very graceful species, but I fear too tender for general adoption.

Chamaecyparis spherioidea variegata has handsome foliage, beautifully variegated green and gold. *Chamaecyparis thurifera* is handsome in a young state, and when kept low by frequent removal, but declines in beauty I think as a specimen.

Cryptomeria japonica nana and its variety *viridis*, offer a fitting contrast to foliage of a deeper green, and they have the rare property of retaining their bright olive green through the winter, which the species seldom does.

Some of the Pinuses are also useful, the very dwarf and close-habited *Abies clausbrasiliana* being admirable for edgings to large groups of deeper-hued foliage. *P. cembra* is very hardy and makes a good bed or a line in a ribbon-border. *Picea Nordmanniana* is the best of all the Silver Firs, and a specimen of this in the centre of a bed with a band of *Arabis caucasica variegata*, or *A. lucida variegata* of some, is beautiful beyond description. The dense habit of the Pine, and the foliage, dark green above, and of a beautiful glaucous hue beneath, make the golden *Arabis* appear to much advantage. The *Arabis*, by the way, is one of the best golden edging plants we have, and I was glad to see Mr. Thomson's notice of it in the Number for October 4th. *P. nobilis* is also fine, and few exceed it in beauty as a single specimen. Small plants of *Abies canadensis* (Hemlock Spruce), and of *A. taxifolia* (Californian Hemlock Spruce), a more ornamental variety than the preceding, which it much resembles, are useful. The majority of the Pinus family may be employed with good effect, but they move very indifferently, and as growing them in pots ruins them for after-planting to attain large dimensions, and as they are impatient of cutting, it is advisable to grow them in pots, and treat them in every way as dwarf plants, specially for decorative purposes in the flower garden.

Thujopsis dolabrata and its beautiful variegated form, are amongst the finest of recently introduced plants, and whilst they are growing to a size suitable for planting, it is worthy of consideration whether these and many others of a similar kind might not be advantageously employed for enlivening the dreary flower garden in winter. Nurserymen

should have them planted in groups so that visitors may see and judge for themselves, and I am certain that if this were done the taste for ornamental shrubs and trees would be diffused, and a zest given to the study of foliage, and its contrasts both in colour and outline, with a view to producing an effective arrangement, which can only be achieved by commencing on a preconceived design. I hope that we shall yet see nurserymen arranging their plants for sale, so that purchasers may at once select the most suitable for their purpose, creating at the same time a taste for arboriculture, which is, perhaps, the most neglected of all branches of horticultural science.

Retinospora pisifera aurea, than which nothing can be more lovely, and *E. obtusa*, are plants that must find their way everywhere; and when we have the dwarf *Thujopsis late-virens* and *Thuja pygmaea* at a price within the reach of all we may consider that we have as fine a lot of shrubs suitable for planting in beds in autumn as can be wished.

In addition to the above, I must name the beautiful *Ligustrum glabrum aureo-variegatum*, *L. japonicum aureo-marginatum*, two beautiful forms of Japanese Privet which may be clipped into any shape and make; and *Osmanthus ilicifolius variegatus*, and its dwarf form.

Various kinds of Box are excellent as edgings, for forming even surfaces either all green, or silver or gold variegated. They may also be employed as bushes and pyramids. *Buxus rosmarinifolia*, *marginata*, *balearica*, and *halepensis* are admirable for decorative purposes.

Ivies, plain and variegated-leaved, and the different Periwinkles, come in as edging plants of no mean order.

The first step is to have a plan taken of the garden, numbering all the beds, and then to decide on those to be filled with evergreens, which should be about one-third of the whole. This will leave one-third for flowering shrubs, evergreen or deciduous; and one-third for dwarf flowering plants and bulbs. When this is done and the arrangement decided on, it is very easy to fill the beds satisfactorily from the stock of most nurserymen, for there are thousands of plants in every nursery that only need seeing to be called into requisition.

The next procedure is forking over the beds deeply; and the shrubs, which should be taken up with balls, must be planted at such distances as to cover the whole of the surface, placing the tallest in the centre, and edging each with some plant of dwarf habit, distinct in colour of foliage and character. After planting give a good watering, and if dry weather continue give occasional waterings afterwards; but if wet none will be required. Beyond this the plants will need no further care until spring, when they must not be allowed to suffer from want of water, and when the time for moving arrives, which may be the last week in May, take them up with balls of earth and plant immediately in the places assigned to them in any open yet sheltered situation, placing them so that each will receive light and air from all points, for no good comes of huddling them together. Water freely at planting and throughout the summer; a mulching an inch or two thick will save much of the watering by diminishing the evaporation from the surface. If any trimming be needed it should be done when the shrubs are growing, stopping the gross, and cutting-in the lanky growths, so that even nicely balanced specimens may be obtained. Further than this they need little attention, and will move again to the beds in October and November as freely as any other kind of plants, if care be taken to preserve a ball of earth at the roots.

To prevent any fear as to the liability to injury consequent on the removal of the shrubs twice annually, all of them may be grown in pots, using a rather stiff turfy loam, and pots large enough to contain the roots comfortably. Drain efficiently, pot rather firmly, and giving a good watering plunge in the beds to a depth sufficient to hide the rims of the pots. In dry weather they must be watered, and after they are removed from the beds they should only be plunged to a depth sufficient to hide the pots, leaving the surface bare so that it may be known when any plant needs watering without the foliage indicating its absence. They should be annually freed of all roots that have penetrated into the soil through the holes in the pot, and potted every other year in October.—G. ABBEY.

(To be continued).

ORCHARD-HOUSE TREES.

I AM quite sure I go with a large proportion of your readers when I thank the "POOR GENTLEMAN" for his very agreeable letter and gentle castigation. He has given us only a portion of the rock on which he foundered by carrying too much sail. I read in the "Orchard-House," in all the editions from the 6th to the 11th—in the latter at page 50, under "Apricot culture," as follows: "While in their young state the fruit must be thinned, leaving at first upon a bush that has been two years in a pot about three dozen, which, when they attain the size of a small nutmeg, must be reduced to two dozen. The third year a tree, if it has prospered, will be able to bring three dozen to maturity. It is, however, better to have a few finely grown fruit than many that are small." This should have acted as a corrective; but I erred in trusting to the judgment of my readers, and hoping for some discrimination in them. I have since for some time found out that in describing modes of culture every sentence must be well weighed, allowing of no deviation from the prescribed mode; if you do, you are, as the boys say, "done."

Now for my confession. I confess that all the time I was writing the above paragraph I was thinking of a tree two or three years old from the nursery, so that the second year in the hands of the cultivator it would be from four to five years old, and quite capable, if well fed, of bearing three dozen of fair-sized fruit. I have just looked at a Peach tree five years old, and bearing thirty-four fair-sized Peaches; but the tree has had rich surface-dressings, and is a sturdy fellow, its branches 8 feet across. Under ordinary treatment two dozen would have been nearer the mark. My caution is a salve to my conscience; but I shall for the future be more strict in giving rules for thinning. Mr. Berger's orchard-house I know to be a great success. The unnecessary points in his culture are roof-ventilation and repotting in autumn—a troublesome business. I have never deviated from the easy and simple mode of culture I at first pointed out—viz., top-dressing in October by taking out the surface earth and effete masses of fibrous roots from 4 to 5 inches deep, and replacing with some rich compost of loam and rotten dung in equal parts. This fresh food in autumn, and surface-dressings in May, June, and July, of horse-droppings and malt dust, equal quantities mixed and saturated with strong liquid manure, seem, if we may judge from the luxuriant health of every tree to which they have been applied, to be perfect as tree food can be. It is indeed quite interesting to observe the seeming instinct with which the small feeding roots come to the surface for their rich food: no turtle-eating alderman could select and eat green fat with more avidity. On looking over my trees the other day I was half inclined, in a flight of fancy, to endue them with reasoning powers, and to conclude that they must have had a meeting, and passed a resolution to the effect that while such rich surface food was comestable they would not go down for any cold, watery, flavourless eating and drinking; for on looking at many hundreds of Peach and Apricot trees full of luxuriant health, I could not find any roots making their way through the apertures at the bottoms of the pots—all were at the surface.

I observe that Mr. Fish plunges his pots. In the light sandy soils of Bedfordshire I have seen pots plunged about two-thirds of their depth with good effect. In stiff soils they are better on the surface. The warm air of the house is like a blanket round the pots, and the roots feel it and enjoy it. I repeat, feed from above in preference to feeding from below; the food is warmer and more easily digested. I have always thought this to a certain extent, but have waited and watched, and now I know it. I also repeat—referring to the trouble that Mr. Fish takes in repotting his trees—that after a tree has grown in a thirteen-inch pot (it is always better to give inches in naming the sizes of pots rather than the pot-makers' terms, as 4's and 6's, to designate sizes), for three or four years, it may be at once transferred to an eighteen-inch pot (18 inches in diameter), which, as far as I can see at present, is the maximum size to be used in orchard-house culture. When established in pots of that size the roots at bottom may remain undisturbed; top-dressing in autumn, and surface-dressing in spring and summer, will keep the tree in luxuriant health

for many, many years. I often wonder what crinkum-crankum shapes the bottom roots of my old trees have assumed—I have not seen them for years.

The amateur orchard-house cultivator should not be oppressed with the weighty cares of repotting; it only troubles him to no purpose. A large tree in a large pot should be a pleasant fixture, requiring, like a very old and well-polished mahogany table, but little care to keep it bright.

The "Singleton Fig" is a misnomer. Its new name was given to it, I believe, by mistake, although it made it more commercially valuable, for trees of it were sold at 18s. 6d., whereas under its true name of White Ischia it was not so dear. No Fig better deserves culture, but only in the forcing-house, for it invariably drops its first crop, which should ripen in May with others when forced; but its second most abundant crop, which it should ripen in July, amply compensates, for no Fig can be more rich and delicious.

One more paragraph and I have done. I have seen spring surface-dressings applied by awkward gardeners so rough, so unsmooth, so unlike what they should be, that I have felt a wish to toss pots and trees into some dark and swollen Lethe-like river. The surface-dressings to which I allude are great lumps of manure, undecomposed, and unfit for any place but the dunghill, heaped on the mould in the pot to a depth of several inches. This covering most effectually keeps out heat from the surface roots, the earth becomes sodden, the leaves turn yellow, the fruit drops, and the wise operator opens his mouth and wonders what can be the matter.

If my favourite compost for surface-dressing cannot easily be procured, the best substitute is rotten or nearly rotten manure chopped up into a neat-looking and friable state. It should next be saturated with strong liquid manure for two or three days, and then used—not piled on 5 or 6 inches deep; the depth should be from 2 to 3 inches—formed into a neat shallow basin, the stem of the tree in the centre, so that the water given should be retained.—T. R.

SUGGESTIONS CONCERNING PROVINCIAL HORTICULTURAL SHOWS.

THE "Secretary of a Country Horticultural Show of thirty years standing" asks our opinion on the proper time to hold a show. That of the past season, he says, was held in the last week in September, which was thought by many to be too late. He adds, the accommodation for the show in a public hall in the town is very good, and the competition amongst exhibitors is great, cottagers also being favoured with a class. From the inquiry made we suppose the managers of the show would like to have it at a time likely to bring together the greatest number of important products. Although he mentions Dahlias, Hollyhocks, and Gladioli as being favourites in the neighbourhood, we apprehend the period that would bring the greatest number of attractive objects to the show would be the one selected.

Now, it is by no means easy to give good advice in a case like the above without more knowledge of the district than we possess. Very often the best time to hold a show is one in which horticulture is very little consulted; the fashionable season at a watering place, or any event in a county or district town calling a number of people to it, is often made the time for a horticultural show. Visitors at such places, more especially when the funds in a great measure depend on what is taken at the door, are more consulted than any particular class of plants, fruits, or vegetables. The latter have to be got ready for the show-day, not the show-day for them. This state of things cannot be altered, neither is it fair to find fault with it; but we will suppose that the show in question is not fettered by any conditions of the above kind, but simply that the good people of a quiet country town want to know when is the best time to insure a good and attractive show, regardless of all outside influences. Although we are quite at sea where our correspondent writes from, we will suppose him to reside somewhere to the south of York, and point out one or two modes of dealing with the show, so as to meet the requirements of the majority of those interested in the matter. That it is impossible to satisfy all must be known to every one

who takes upon himself the duty of secretary. By way of assisting the inquirer we will state a few facts connected with a local horticultural show of about the same standing as the one alluded to, but which was, perhaps, at one time at least, in a more prosperous condition, and its operations more extended. Examples are always good monitors, and we give this one before venturing an opinion.

The horticultural society alluded to is connected with a town of some 25,000 inhabitants in a rural but somewhat wealthy neighbourhood, and not a hundred miles from London. Most of the leading gentry and principal tradesmen of the town and neighbourhood are members paying one guinea annually, for which they have four tickets of admission to each show, there being two in a year. Gardeners pay 5s. subscription, which by a defect in the administration merely allows them two tickets to each show. The funds are also augmented by payments at the doors, visitors at an early hour being charged 2s. 6d., and later in the day 1s. The first and most important show is held in the last week in June, under canvass, in a field commanding one of the finest prospects in England, there being at least half a dozen large tents, with two military bands, and all the pomp of a metropolitan show; and if the day proves fine it is so well attended that, notwithstanding the tickets of subscribers, a sum of upwards of £100 has frequently been taken for admission. The second show is generally in the first week in September, and is held in the public hall or market-room—a spacious room, in which it has been said that six hundred have dined. The September show is more for fruit than plants; but there are the cut flowers of various kinds, with vegetables of almost every description; and as an exhibition of horticultural produce and skill it is far superior to the June show, but never so attractive. Fashionable visitors like more space, and, consequently, attend in less numbers, so that in the most successful days the payments for admission bring but a small sum to the exchequer, and this show, as compared with the June one, is a dead loss to the Society. The prizes are not large at either of the shows, but the varied productions make up a considerable display, and the June show is looked upon in the neighbourhood as a fête at which the best articles of attire are brought forth. Now, this Society, like all others, has been liable to the visitations common to such institutions—one or two unfortunate days, and a change of place for holding the show, coupled with, perhaps, the fact that its novelty is wearing off, has much impaired its position, so that, instead of having a considerable sum in hand, the Society is, or was very lately, on the verge of insolvency, not from any want of care or mismanagement of its affairs, but solely from the misfortunes which such institutions are liable to.

With a case like this before us, we confess feeling some hesitation in giving advice; but as our correspondent's query simply relates to the best time to hold one show, the matter is circumscribed, still our answer must be a qualified one. If the show be for plants, or if they are regarded as of more consequence than fruits, June is the best time, and not too late in the month. If, however, forced fruits, in addition to plants, be in requisition, the last week in June will in a great measure answer for both, as by that time Grapes, Melons, and possibly Peaches and Nectarines, may be forthcoming, with Cherries and Strawberries from out of doors, and a host of vegetables and plants of the finest description. If an extended show of fruit and cut flowers be the desideratum, the first week in September will generally furnish both; but, as stated at the beginning of this article, if the company is likely to be greater in June than in September, let the fact have due weight in the decision, as no show, nor in fact anything else, can well go on without visitors. In most cases an energetic secretary, and half a dozen active business committee-men, having a perfect knowledge of the feelings and requirements of the neighbourhood, are able to judge whether it is prudent to make a bold move in a progressive direction or not. If your Society has existed thirty years, and is still popular, there is proof that the principle is healthy, and that a more liberal course might be ventured upon with advantage. Although we would strongly advocate the increase of prizes, and the encouragement of horticulture, we are not blind to the fact that the public at large look also at some other source of amusements as being necessary adjuncts to such a

meeting, and these are expensive items. The hire of half a dozen large tents or marquees will cost from £20 to £30, perhaps, and music is also costly; added to which the hire of seats, the payment of assistants, and other charges, trench heavily on the funds; but it sometimes happens that a bold move in this direction is successful. The advisability of changing the established head-quarters in the Market Hall, to a place out of doors, is a subject that can only be judged of by those well acquainted with the neighbourhood, but it is very possible it might succeed. A spirited attempt is often followed by success, and the projectors receive their meed of public approbation. If an out-door exhibition be decided on, then by all means have it in the end of June or beginning of July, if the situation is late; the length of the days and other things favouring out-door amusements at that time more than at a later period. By well considering all the arrangements beforehand, and perhaps revising the schedule, or in fact making a fresh one, a feature may be given to the show which it has never yet had. It might also be announced, if the June show were successful, and the funds of the Society would afford it, that a second would be held in September for fruits and cut flowers, &c., as at present; this show, of course, being held in the market-room. For such a show we should say that about the 10th of September is a good time, as Peaches and Nectarines would then be ripe; the end of that month is too late for them. It may be thought that the interval between the two shows is too great, but the public do not like too frequent repetitions, and July and August do not present much that is important beyond what may have good representatives at one or other of the shows here recommended. As the show is well supported by exhibitors, it is very likely that a spirited move in the way suggested will meet the support of the public, and that the local press will have the opportunity of recording a complete success, everybody being pleased with the affair, and that thousands of visitors will retire to their homes with the remembrance of a social and intellectual treat, which such meetings afford. We have little hesitation in recommending a June show; but in the event of such not being decided on our ignorance of the locality and its peculiarities prevents our giving an opinion on the subject of the show being held either out-doors or in. We would have the September one as early as convenient, but generally about the 10th will be found the best time.

ROYAL HORTICULTURAL SOCIETY.

OCTOBER 11TH.

FLORAL COMMITTEE.—The scarcity of plants and flowers sent for the examination of the Committee this day fully realised the fact of the departure of sunny days and beautiful flowers; but we have no reason for complaint. The interesting meetings held by the Committee during the past season, and the number of plants and florists' flowers that have been examined, fully prove that a deep and lively interest in horticulture still exists. George Cooper Esq., Alpha House, Coburg Road, exhibited a small plant of an *Oncidium* from Brazil. It was recognised as a well-known variety. Mr. Legge, Edmonton, sent three seedling Dahlias—Lord Warden, deep orange red, tipped with white; Mr. Bolton, dark lilac rose; and Lightning, yellowish buff striped with red, of good form. This latter seedling received a second-class certificate.

From Mr. Bull, Chelsea, came three very pretty and interesting varieties of British Ferns—*Polystichum angulare rotundatum*, *Polystichum angulare grandiceps*, and a form of *Athyrium Filix-femina*; but the plants were too young to decide upon their merits, though they are all of them excellent varieties. *Aucuba japonica picta* (mas), in flower, a very beautiful variety with broad white variegation, received a first-class certificate, and *Aucuba japonica vera* was also shown with two clusters of its brilliant red berries. Mr. Macintosh, Hammersmith, sent *Solanum capsicastrum hybridum*, a cross between *S. capsicastrum* and *S. pseudo-capsicum*; it will form a nice plant, intermediate in size and habit between its parents—second-class certificate. Mr. Macintosh also had a seedling *Capsicum* with round seed-vessels the size of marbles.

Messrs. Stuart & Main exhibited cut specimens of seedling *Pentstemons* and *Antirrhinums*, some of the latter good flowers, but not an advance on varieties in cultivation. Messrs. Veitch, Chelsea, sent three seedling *Cattleyas* of much interest—*C. devoniensis*, white narrow petals, with deep purple lip—first-class certificate; *Cattleya Dominiana alba*, a white variety of *C. Dominiana*—first-class certificate; and *Cattleya exoniensis*, a beautiful variety, which received a first-class certificate at the last meeting of the Committee. Messrs. Henderson, Wellington Road, exhibited *Pelargonium Lady Cullum*, another variety of those beautifully varied-coloured *Zonale Geraniums*, the introduction of which belongs solely to this well-known firm. *Lady Cullum* is distinct in colour, and equally beautiful with Mrs. Pollock, &c. It received a first-class certificate. Mrs. Gerard Leigh was a white-edged variety with a coloured zone, but inferior to *Italia Unita*. Mr. Fleming, Cliveden, brought cut specimens of several seedling *Pelargoniums* not yet named, they are of the intermediate section, having the truss of the *Nosegay*, but broader petals. Some of them are novel in colour, one being a bright orange scarlet, others deep purplish rose of varied shades. Next season these will probably appear with names, and will take a good position in that section of *Pelargoniums* which they represent.

VISITS TO GARDENS PUBLIC AND PRIVATE.

REED HALL, COLCHESTER, THE SEAT OF J. T. HEDGE, ESQ.

HAS ever any Rose-grower had the homage paid to him that Mr. Hedge has? Have ever any others but he been asked where he was to exhibit, as the questioners would rather not enter into competition with him? Has ever any amateur held a more distinguished position as an exhibitor than he has done? Nay, is there any one, north, south, east, or west, who has the courage to pluck the laurels from him, or to deny him the place he has unquestionably won as the champion exhibitor amongst amateurs? Let us, then, take a peep at the garden from whence these achievements issue.

Reed Hall is an old manor house, about a mile and a half from the old Roman town of Colchester, and was so called (its original name being Foxborough), because until a late period it was thatched with reeds. There is nothing in the house itself to call for remark, and I dare say thousands might pass by and never so much as dream what marvels of skill are produced there. The situation is high; the soil deep, rich, unctuous loam, such as the Rose delights in; and the drainage excellent. Here are conditions to begin with sufficient to encourage a grower, but not sufficient in themselves to insure success. In such a soil the briar is at home, and the *Manetti* comparatively useless, so that Mr. Hedge mainly depends on the former for his stocks. And here let me say that he does not leave anything to chance work. When he wishes to get briars he does not buy them of those who go about for them, and perhaps have them for days or weeks out of the ground, but he goes or sends some of his men; and the briars are dug out, carried home, and planted at once, many of them in the situation where they are to remain; and on stocks so treated *Teas*, *Noisettes*, and *Bourbons*, as well as *Hybrid Perpetuals*, flourish with unwonted vigour. The Rose garden is arranged in beds; and as these are of a convenient size and of various forms, it is easy to go round them and examine every flower in the bed with great ease: this, I think, is a great recommendation. Here is a bed of *Teas*, and there a bed of *Hybrid Perpetuals*; and you can, moreover, see the names of them all, for Mr. Hedge is methodical to a degree in everything he does, and legible and accurate labelling is a matter on which he prides himself. Where there are standards the labels are attached to the trees; where dwarfs, pieces of slate—such pieces as are taken off by slaters, cut and prepared afterwards—are used; they will then last for years. In everything there is the greatest neatness; all his cards, shades, slates, &c., display this, which is a great charm in a garden, and always tends to set off flowers however good, while the very best flowers are spoiled by want of it.

I have said that he does not use the *Manetti* stock much, for he finds that it very soon, on such stiff soil, kills the *Roses*, so that they rarely last more than two years—in fact,

it is a stock adapted better for poorer and lighter soils, which can be highly manured. Mr. Hedge does not encourage autumn blooming. His object is to obtain flowers in the Rose season, and not afterwards, and hence he says that he prefers not to bleed his plants by shortening the shoots to procure an autumn bloom. Especially is this the case in a dry season like the present year. He says the plants require all the vigour they can for themselves, and therefore he would not allow even the blooms to be picked off.

With regard to the removing of Roses, he does this as a rule every three years, although some are left for five; but he considers that they ought to be removed every three years. By having his beds of different ages they are not all removed at the same time, and so great an amount of labour as that of replanting all his stock is avoided. What is the amount of this stock? will naturally be asked. Well, I believe not far short of 5000. But then these are not all planted out in beds. Many are in two large squares, while there is a large border of dwarfs containing some on the *Manetti* stock, which, as I have said, is but sparingly used. It is manifest that Mr. Hedge, having so large a stock, and budding a considerable quantity every year, from whence he can get maiden blooms, stands on a great vantage ground above common mortals. Any one who has noticed his stands must have remarked the splendour of the Teas and the variety in his boxes. To obtain the former great care is taken. He has a large stock of old parasols and umbrellas, and these are opened out over the trees as the buds are expanding, and they are thus preserved from the influence of the weather; and there, in that little sheltered corner of the house, is the *Banksia*, budded on which those wondrous blooms of *L'Enfant Trouvé*, Mr. Cant's Rose, are found—those glorious blooms, which have made many a Rose-grower open his eyes widely; in fact, everything that skill and experience can suggest has been done to make this a very paradise of Roses.

Mr. Hedge is no great lover of novelty. He waits to see a Rose well proved before he puts it down as *A1*; but such flowers as Charles Lefebvre, François Lacharme, Alfred de Rougemont, and Baron Adolphe de Rothschild he cannot do without, and when once he adopts a Rose he propagates it largely. Nor amongst the notabilities of his garden should I omit Walter, as good a judge of a Rose well nigh as his master, and as enthusiastic in bringing them out in good order for exhibition. Will not Walter sit in a luggage-van, all night if need be, so that the boxes shall not be capsized? Will he not regulate the pace of the van that takes them to the Palace or Kensington?—aye! will he not sit up five nights in the week when showing is in season, and more too if needed?

Nor are Roses the only things cultivated here. Here is a square of Dahlias from which grand blooms will be cut which shall carry off cups, and there some splendid *Asters* which shall take away first prizes too. Peep, too, into that greenhouse; see those pots of Japan Lilies. Did you ever see anything more full of bloom, or more densely packed than they are? Will they not astonish the Colchesterians next week at their flower show? (this was in August). And here are greenhouse plants well done and ready for the earlier shows next year; then in that coolinery see the magnificent Black Hamburgs, and even Muscats, lying in rich abundance; look even at the vegetable garden, and see the vigour of growth, and order, and regularity, and then say whether good gardening is not practically carried out. And now suppose that, having made your *petite tour*, you enter inside the hospitable walls of Reed Hall. Let me tell you, if you are not a teetotaller, that you will find there as good a glass of wine as is to be had in England, and that, whatever you are, you will get as hearty a welcome as is to be had from John o' Groat's to Land's End—aye, or even in the dear old green isle herself, around whose name cling many sweet and pleasant memories; and as you sit there listen to your host as he descants on Roses, their characters, their caprices, their triumphs; if no hairbreadth escapes by flood and field, there are midnight journeys by railways, and *contretemps* which it required a good courage to overcome. And then you may hear racy stories of the doings of the pompous officials of the Imperial Society of Toadyana, and of the brilliant offer of a 2s. 6d. prize for bringing up a box of Roses in September to, let us say, Timbuctoo; and

if you have your ears open and your wits about you, you may hear many a wrinkle that will be as gold to you by-and-by—at least this was my experience. I had no recommendation to Mr. Hedge but that I loved flowers and knew something about Roses; and yet I was treated with a hospitality so genial, and a courtesy so truly that of an old English gentleman, that amongst my sunny recollections I have to put down in the tablet of my memory my visit to Reed Hall.—D., Deal.

TRITOMA UVARIA CULTURE.

IN your Number of October 4th, which has only just come under my eye, Mr. Robson asks for the practice of others in reference to this ornamental plant, and I willingly give the experience of an amateur in a small way.

The *Tritomas* are especial pets of mine, and I think I may claim success for them this year, inasmuch as the spikes have all been between 5 and 6 feet in height, the last fourteen inches being densely clothed with bloom, fully expanded to the very tips. The flower-stems began to shoot up in the beginning of August, and by the third week of that month were in all their glory. The plants have never been watered at any time during the season; and my own idea is that the peculiar nature of the soil, which is a pure loam, is in a double sense at the root of the matter. All bulbs, in fact, succeed well here, and *Crocuses* and *Snowdrops* are grown by the acre in this neighbourhood for the London market. A strong confirmation of this opinion I find in the fact that when I resided in Middlesex, the soil being a gravelly clay, the same plants never did well with me, showing blooms of only half the height, and often only in time to be nipped off by the frost before they expanded. As soon as I removed here and transplanted them into this soil all trouble to induce vigour ceased, the plants rapidly increased, and the flowers have always appeared some weeks earlier than before.

Some time ago it was recommended in this Journal never to meddle with their foliage. I have followed out this advice, and find serious injury always follows its infraction. This constitutes a great drawback to the ornamental character of the plant, as the long leaves look very untidy in the winter and spring. A plant that was "trimmed" a bit last autumn "to make it look tidy," as my man called it, before I had time to interfere, totally vanished in the winter, and a few suckers are all that is left of it now.

I usually protect them in the winter by a thick coat of fine ashes laid round the crowns. The variety *glaucescens* appears to be the most hardy here, and the flowers are brighter and more showy than the *grandiflora*, but the foliage being narrower gives a less graceful habit to the plant.—GEORGE F. BARRELL, *Spalding*.

SOME HARDY FERNS PREFER A HIGHER TEMPERATURE.

I LIVE in a land of Ferns, some, indeed most, of the varieties, British ones, being indigenous to this county. It may be interesting to other growers of Ferns to know that some species which are found in this county will thrive far more luxuriantly in the hothouse than in their own habitat. As to *Asplenium marinum*, I believe this is already known. On the seashore near this place it grows sparingly and with no great luxuriance. In the stove here it flourishes most luxuriantly. *Asplenium lanceolatum* is found in great abundance near Barmouth, in this county. In the stove its character is totally altered. Instead of being a small shrivelled plant, it grows with such luxuriance that at first sight it may be taken for *Asplenium adiantum nigrum*. *Lastrea recurva* grows equally well in the hothouse.

I may also mention *Asplenium septentrionale*. Till I introduced it into the stove I kept a plant for two years lingering during the winter with a frond or two. It is now looking healthy, with many fronds; and in the last month I obtained a healthy plant from Snowdon, which was potted, and placed near the other, and not a frond has changed its colour.

Of *Polystichum lonchitis* I cannot speak so favourably;

though we are on the west coast of Wales, it hitherto has not done well here. Last year it lived through the winter in a cold frame. I have tried it in the hothouse, it began to shrivel there. It does not succeed much better in the greenhouse. I am inclined next year to try it out of doors.

Woodia ilvensis grows without any particular care in our fernery, which is under the shade of a large Beech tree.—
A FERN-GROWER, Peniarth, Merionethshire.

CONSEILLER DE LA COUR PEAR.

THE Rev. S. Reynolds Hole, of Cauntton Manor, near Newark, informs us that he has just weighed two fruit of that variety, and he wants to know "whether 18½ ozs is, or is not, an unusual weight for a delicious dessert Pear grown in a midland county;" to which we readily reply that it is an astonishing weight for this, or any other delicious dessert Pear. The greater experience we have of *Conseiller de la Cour*, or *Maréchal de la Cour*, as it is sometimes called, teaches us that it is not only one of the finest Pears in cultivation, but that it is one which does not confine its fine qualities to certain, or very highly favoured localities, but will succeed even in those districts where the choicest Pears are rarely to be met with in perfection.

MR. J. CATTELL'S NURSERY, WESTERHAM.

WHEREVER gardening is carried on with energy, combined with skill and careful management, there is much to see that is both interesting and pleasing, as well to the professional horticulturist as to the amateur. This is more particularly the case in extensive grounds, where, from the variety of subjects presented to notice, the ability of the cultivator is rendered more manifest. The perseverance of English gardeners is often a theme for eulogy, and we are all proud of their exploits, and, as Englishmen, we all love to praise and admire their achievements. Such was the pleasure I experienced on a visit to Mr. Cattell's nursery at the end of last month.

The nursery, situated on the north side of the town of Westerham, has been established many years, and is too well known to the horticultural world to need particular description. For the information of your readers it may be as well to state that it is easily reached from the Sevenoaks Station, a few miles to the east, or from the Caterham terminus by the omnibus, passing through the villages of Orsted and Limpsfield, just under the eastern portion of the ridge of the North Downs, one of the prettiest drives in the county of Surrey.

The premises have been greatly improved by the entire rebuilding of the seed warehouse, offices, shop, and residence, with a handsome frontage in the High Street of Westerham now in course of completion, and which will add greatly to the convenience of the establishment.

Passing through the building the visitor at once enters the nursery. The first object of attraction is a belt of Conifers, with some ornamental shrubs intermixed, on each side of the road leading to the lower part of the grounds. This plantation, which is of considerable length, contains all the varieties now ordinarily used for ornamental purposes, excepting the larger Pinuses, with many beautiful kinds of recent introduction. Being tastefully arranged, the view from the upper end is very striking; the more so at this time of year, when the diversity of the foliage of the coniferous tribe is seen to the best advantage; and, being interspersed with the variegated forms of the Holly, Box, Negundo, Syringa, the effect is considerably heightened. Among the Conifers are fine specimens of *Abies* (*Picea*) *nobilis*, *A. Nordmanniana*; *Cupressus Lawsoniana*, *C. macrocarpa*, *C. Goveniana*; *Thuja gigantea*, *T. aurea*; *Thujopsis borealis*; *Juniperus drupacea*, the curious *J. sphaerica*, *J. hibernica compressa*, a very diminutive form of the Irish Juniper; *Abies clauseniana* and *A. pyramis*. The ground on each side of these belts is appropriated to seed-plots for kitchen garden plants, Strawberries, and some herbaceous and annual flowers.

Crossing the public road which divides the nursery, the principal compartment is entered containing the stock of American plants, a very complete collection in excellen

condition, notwithstanding the long drought of the summer, which has seriously affected this class of plants in many parts of Surrey, and probably in other localities where the soil is not naturally adapted to them. Here were also the quarters for the Roses and the more choice ornamental shrubs, the orchard-house, propagating-houses, flower-beds, and the Dahlias, then in magnificent bloom.

Roses form an important branch of the business here, and have been successfully cultivated for many years, the stock numbering many thousands. To see one particular kind was the chief object of my visit. A new seedling raised by Mr. Cattell is being sent out this autumn for the first time it is named "Beauty of Westerham," and is one more instance that good Roses can be originated in this country. When I first saw a single bloom of it, now more than two years ago, in a box exhibited at the annual Show of the Blechingley and Nutfield Cottage Garden Society, in company with Victor Verdier, *Senateur Vaisse*, *Madame Furtado*, *Louis XIV.*, *Madame C. Crapelet*, and others, then comparatively new Roses, it appeared a beautiful and distinct flower. I expressed my opinion of it at the time in another journal, and a further acquaintance with it gives me no reason to change my opinion. Its qualities may be thus summed up. As an English production it is well calculated to withstand the vicissitudes of our climate, being vigorous in habit, with bright green foliage, blooming freely all the season, delightfully fragrant, equalling in that respect *Madame Furtado*, and of a rich scarlet crimson colour. It will be said that we have enough crimson scarlet Roses; and all who have seen the noble blooms of *Senateur Vaisse*, *Charles Lefebvre*, *Beauty of Waltham*, *Lord Clyde*, *Gloire de Santenay*, *Maurice Bernardin*, *Duc de Rohan*, and some others that have this year been produced and exhibited, must acknowledge that we are rich in this colour, yet *Beauty of Westerham* is distinct from any of the above varieties; and Mr. Cattell is quite justified in sending it out as a useful addition to our Hybrid Perpetual Roses.

Another novelty, of a very different nature from the preceding, is a *Tropaeolum* called *Foxhunter*, obtained by Mr. Farmer, the intelligent foreman, from T. Schultze. This will prove a very useful bedding plant, where masses of colour are sought for, being a most profuse-blooming kind, of a very brilliant scarlet. A peculiarity of this *Tropaeolum* is the sending out spurs 3 or 4 inches long at every joint along the stem, producing abundance of flowers. Mr. Farmer informed me that it is the freest-blooming *Tropaeolum* he has ever known. The foliage somewhat resembles the well-known Crystal Palace kind.

The fine weather previous to my visit had brought out the Dahlia blooms in great abundance and perfection. The large plot of ground planted with Dahlias afforded a splendid sight. Mr. Cattell is not unknown to fame in connection with this flower, having on several occasions boldly entered the lists with the Hector and Achilles of Dahlia growers from Slough and Salisbury.

Not being a connoisseur of Dahlias, I speak with diffidence about them. Of the great number of varieties, I could not but admire the large and magnificent blooms of *Andrew Dodds*, *Midnight*, and *Triomphe de Pecq*, among the dark kinds; *Lord Palmerston*, *John Keynes*, scarlet; *Lord Derby*, crimson; *Queen*, *Golden Drop*, and *Goldfinder*, primrose and yellow; *Juno*, lilac; *Hon. Mrs. Trotter*, *Miss Pressley*, and *Charles Turner*, mottled or tipped at the edges of the petals.

A walk through the orchard-house necessarily concluded my visit, for, although there was much more to see, my time was limited. This orchard-house is what I have been taught in the columns of this Journal an orchard-house ought to be—viz., a simple wood-and-glass structure to protect fruit trees from the inclemencies of this variable climate, and to further the ripening of the fruit without the aid of artificial heat. Mr. Farmer informed me that the house in question fully answered the purpose it was intended for. His explanation was very simple. The trees which are all in pots are brought into the house in February, when the sap generally begins to rise. After they have fruited, and the young wood is thoroughly ripened, they are brought out and fully exposed during the winter. On their treatment while under cover it is no part of mine to enter, not pretending to sufficient acquaintance with the subject further than the

common attribute of most of us, that we cannot help believing what we see. Judging from the superb fruit on the trees in that orchard-house, it seemed to me marvellous that there should be any controversy at all upon the subject.

Among the ornamental shrubs I noticed the interesting *Colletia biconensis*, *Desfontainia spinosa*, both of which have proved hardy with me, and the latter bloomed well; *Griselinia littoralis*, recommended by Mr. Robson, and very properly; the curious *Rubus leucodermis*, and *Cotoneaster Simonsii*, with its bright scarlet berries, which render it very ornamental in winter.—ADOLPHUS H. KENT, *Blechningley, Surrey*.

PEARS ON QUINCE STOCKS IN A LIGHT SOIL.

IN your last Number of the Journal I observe in your answer to "YORKSHIRE" that you recommend him to procure Pear trees on the free stock, on account of the dry porous nature of his subsoil.

I live in a more cold and bleak portion of Yorkshire than Doncaster and its neighbourhood. My garden is on a light dry limestone soil overlying a limestone gravelly subsoil. In this soil I have grown a number of Pear trees on the quince stock for the last twelve years. My collection consists at present of forty-eight Pear trees, of which seventeen are dwarf bushes. With two exceptions they are all on the quince stock, and these two have given me more trouble with a less satisfactory result than a dozen of the others on the quince. All my trees are in perfect health, and in admirable order. I simply state this to show you that I know something of the subject on which I am writing.

From my own experience I would most decidedly recommend "YORKSHIRE" to purchase bush or pyramidal Pear trees on the quince stock. The list of Pear trees extracted from Mr. Rivers's "Miniature Fruit Garden" contains several varieties not suitable to the climate of Doncaster, unless they be grown against a south or south-west wall. I should recommend the following Pears as much more likely to succeed as bushes or pyramids:—*Doyenné d'Été*, August, on quince; *Jargonelle*, August, ditto; *Beurré Giffard*, September, ditto; *Beurré Goubault*, October, early, ditto; *Beurré Superfin*, October, ditto; *Louise Bonne of Jersey*, middle of October, ditto; *Comte de Lamy*, ditto, ditto; *Fondante d'Automne*, ditto, ditto; *Thompson's*, ditto, ditto; *Beurré Dial*, ditto, ditto; *Seckle* and *Suffolk Thorn* on the free stock.

If "YORKSHIRE's" garden is not well sheltered from the prevailing winds it would be desirable to procure bush-pruned Pear trees, otherwise the pyramidal form of training is to be preferred.

I like trees grown in the south the best, as their wood is always well ripened.—C. M., *Yorkshire*.

[We are much obliged by this communication. It is evidence that on some dry soils in certain localities the quince stock succeeds; but on light soils Mr. Rivers recommends that the soil over the roots of the quince stocks be mulched, and the junction of the stock and scion covered with earth, we presume to encourage the production of roots from the latter. On a light soil with a chalky subsoil the only trees that failed in our orchard were those on quince stocks.]

ORCHARD-HOUSE AT GREAT MARLOW.

REFERRING to "J. F.'s" account of the orchard-house at Great Marlow (No. 183, page 256), I shall feel much obliged if you will state the numbers of each sort of fruit tree in the house, that some idea may be formed of the yield. The average which he gives is no criterion.—DAVID B. LINDSAY.

[The following is a list of the trees, and the number of each variety:—*Pears*.—*Easter Beurré*, 2; *Winter Nelis*, 2; *Fondante d'Automne*, 2; *Marie Louise*, 1; *Colmar d'Arenberg*, 2; *Beurré Rance*, 2; *Passe Colmar*, 1; *Josephine de Malines*, 1; *Fladberg*, 3; *Beurré Superfin*, 1; *Bergamotte Esperen*, 1; *Beurré Dial*, 1; *Louise Bonne of Jersey*, 1; *Van Mons Léon le Clerc*, 2; *Brown Beurré*, 1; *Napoleon*, 1; *Glen Morceau*, 2.—Total, 26. *Apples*.—*Mannington's Pearmain*, 1; *Reinette du Canada*, 2; *Court-Pendu-Plat*, 1; *Celina*, 2; *Cox's Orange Pippin*, 3; *Ribston Pippin*, 2; *Old Nonpareil*, 1; *Emperor Alexander*, 1; *Scarlet Pearmain*, 1; *Golden Pippin*, 2; *Northern Spy*, 1; *Melon Apple*, 3; *Male*

Carle, 1; *Scarlet Nonpareil*, 1; *Boston Russet*, 2; *Court of Wick*, 1; *Cockle Pippin*, 1; *Wheeler's Russet*, 1; *New Rock Pippin*, 1; *King Pippin*, 1.—Total, 29. *Peaches*.—*Salway*, 2; *Royal George*, 3; *Barrington*, 2; *Grosse Mignonne*, 2; *Early York*, 1; *Violette Hâtive*, 1; *Noblesse*, 1; *French Galaide*, 1; *Belle Bance*, 1; *Walburton Admirable*, 1; *Bellegarde*, 1.—Total, 16. *Apricots*.—*St. Ambroise*, 2; *Moorpark*, 7; *Peach Apricot*, 5.—Total, 14. *Plums*.—*Kirke's*, 2; *Jefferson*, 1; *Late Orleans*, 2; *Reine Claude de Bavay*, 2; *Pond's Seedling*, 2; *Coe's Golden Drop*, 2; *Impératrice*, 1; *Transparent Gage*, 2; *White Magnum Bonum*, 2; *Cloth of Gold*, 2; *Guthrie's Late Green*, 1; *July Green Gage*, 1; *Early Prolific*, 1.—Total, 21. *Nectarines*.—*Elruge*, 2; *Rivers's Orange*, 2; *White*, 4; *Hardwicke Seedling*, 2; *Violette Hâtive*, 2; *Balgowan*, 2; *Bowden*, 1; *Pitmaston Orange*, 1.—Total, 16. *Cherries*.—*Empress Eugénie*, 1; *Cleveland Bigarreau*, 1; *Black Eagle*, 2; *Waterloo*, 1; *Governor Wood*, 6; *Royal Duke*, 1; *Circassian*, 1; *Brown's Black Heart*, 1; *Elton*, 1; *Werder's Early Black*, 1; *Florence*, 1; *Duchesse de Palau*, 1; *Black Tartarian*, 1; *May Duke*, 1; *Belle Agathé*, 2.—Total, 22.]

WORK FOR THE WEEK.

KITCHEN GARDEN.

WHEN Box-edgings require relaying, or walks gravelling, let it be done forthwith. Best, the roots of the latest crop to be now taken up without being bruised and the tops carefully twisted off above the crown, to be stored away in any dry place free from frost in sand or earth, or buried in heaps of earth, as other roots are kept. *Broccoli*, it is now time to check that growing luxuriantly by laying it down. We find constant attention is necessary to secure the plantations of Cabbages, the Cauliflowers under hand-lights, and the winter Lettuces, from the ravages of slugs. Dust the ground between the plants every second day with soot and quicklime, and make good the blanks from the seed-beds. Where Carrots, Parsnips, Salsify, and Scorzonera, are liable to be attacked by grubs, which are very numerous this season, or to injury by frost in consequence of the situation, being low and damp, the sooner they are taken up and stored away the better.

FRUIT GARDEN.

The preparation of quarters for the reception of Gooseberries and Currants should be completed, as planting may shortly commence. The formation of fruit-tree borders should be proceeded with, and stagnant water must be carried off by drains. A stratum of stones or bricks should intervene between the soil of the border and a cold clayey bottom. Although these precautions may not be strictly necessary in all cases, there are but few instances where they can with propriety be dispensed with.

FLOWER GARDEN.

Some temporary coverings should now be at hand to protect half-hardy plants from the first attack of frost, which is generally of short duration, when a spell of fine weather succeeds. By such protection for a night or two their flowering season may be prolonged for a few weeks. *Chrysanthemums* against walls should be closely tacked in, and spare lights, reed-covers, or mats, kept in readiness to protect them from sharp frosts. A fresh, green, cheerful appearance may be given to the flower-beds as soon as the frost has done its worst amongst the bedded-out plants, by introducing a supply of small neat plants of the different dwarf hardy evergreen shrubs, such as *Aucubas*, *Berberis*, *Laurustinus*, *Arbor Vitæ*, *Laurels*, and any of the many sorts of *Pinus*, *Rhododendron*, *Holly*, &c., to be kept in pots. By disposing of the various tints of green and variegated foliage in separate or mixed masses, a pleasing and interesting character could be given to the view of the flower garden from the windows even in the dull days of winter. Choice Alpines should be plunged in coal ashes or old tan. Place Carnations and Picotees in pots in cool frames, and water sparingly. Protect tender Chinese and Tea-scented Roses. Shrubs in overgrown walks should now be cut back or taken up and replanted. Cuttings of Laurel and other shrubs may now be prepared and put thickly into nursery-beds in the reserve garden. Anemone roots to be planted 2 inches deep. Tulip-beds to be prepared by digging the ground

12 or 15 inches deep, and mixing decomposed turfy sandy loam with the soil. The *Ranunculus*-beds to be prepared by taking out the old soil to the depth of 1 foot, putting in about 6 inches of well-rotted cowdung at the bottom, and then some good rich loam, mixed with a little of the cowdung, to 6 inches above the level of the surrounding surface, the bed when finished sloping from the middle to the sides.

GREENHOUSE AND CONSERVATORY.

Hints from the thermometer should regulate the admission of air to these structures. Favourable weather should be taken advantage of to the utmost extent, and in many cases openings for air may be left all night. The careless practice of opening the sashes at stated intervals to any certain degree without reference to external circumstances, must, throughout the season, be avoided. Keep the *Azaleas* and *Camellias* regularly moist at the roots, never allowing them to become too dry or too wet. Shift herbaceous *Calceolarias* and *Cinerarias* regularly. Give plenty of air to *Heaths* and *New Holland* plants, and water very carefully; the same with *Orange* and *Lemon* trees. Shift advancing *Pelargoniums*, and water freely at the root. Take pot *Chrysanthemums* into the greenhouse and conservatory; water with weak manure water occasionally. Shift Chinese *Primroses*, and keep them in a light airy place. If any of the beautiful tribe of *Tropaeolums*, particularly *tricolorum* or *Jarratti*, which have flowered early in the season, start into growth, they should not be checked, but allowed to grow slowly through the winter; but if there is no appearance of this, which is best for their future success, their roots should be kept inactive in a cool place, with the soil about them quite dry, and they must be protected from mice. The necessity of a store of the various kinds of soil for potting should invite the precaution of securing a sufficient stock for winter use under cover before the drenching rains of autumn have rendered it unfit for use.

PITS AND FRAMES.

The earliest opportunity should now be taken to remove *Auriculas*, *Carnations*, *Picotees*, *Pinks*, *Pansies*, and all such florists' flowers to their winter quarters. Cold dry frames, raised upon a few bricks to give a circulation of air beneath and among the plants, are the best situation for them. But very little water should be given during the winter, only sufficient to keep them from flagging. Additional air should be admitted to the frames daily by tilting up the sashes in favourable weather; the vacancies around the bottoms of the frames to be filled up, and a moderate degree of protection to be given in the most severe part of the winter. Indeed, during a great portion of the winter no coverings will be required, as the plants will bear to be frozen without injury if the lights are covered with straw or litter to exclude the sun's rays, when they will thaw gradually and slowly. The frames to be looked over occasionally to see that the plants do not suffer from drip from the lights, or from slugs, snails or canker.—W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

MUCH the same as in previous weeks. Weather still dry, with parching east winds. Ran the Dutch hoe through every bit of ground, to give an open surface, and cut up every incipient weed. Pulled up all the Peas and Beans done bearing. A piece of Dwarf Kidney Beans still very good. *Scarlet Runners*, thanks to a little sewage water, are still very fine, whilst in most cottage gardens hereabouts they have done little good this season. But for the sewage we would have been in the same position. Two years ago we obtained a very superior *Scarlet Runner* from Mr. Veitch—the pods are larger and more thick and fleshy than those of the ordinary kind. White Dutch Runners and White *Scarlet Runners* are hardly worth growing in comparison with the old scarlet-flowered and mottled-bean kind. Of the White you obtain fine, large, long, smooth pods, but even if gathered young they never seem to eat so crisp and juicy as the *Scarlet Runners*. For amount of yield of real nourishing food there is no better friend to the cottage gardener than the *Scarlet Runner*.

We have sometimes been in the habit of associating the

Scarlet Runner with the degree of refinement and civilisation arrived at by the working classes. We can recollect when, in Scotland, the *Scarlet Runner* was merely seen amongst the working people as a flower trained up by the side of a window. In cottage gardens you could scarcely meet with any vegetable but *Curly Greens*, *Cabbage*, and *Potatoes*. *Canliflower* was considered to be aping the aristocracy. The cooling *Lettuce* on a hot summer day, the nutritious Dwarf Kidney Bean and *Scarlet Runner*, were wholly discarded; and on our last visit to Scotland, though there were improvements in cottage gardens, the homely natives might well have taken a lesson from their English neighbours, who would have secured a far greater variety, and more nutritive qualities of food, from the same sized garden. The Scotch peasantry, who, perhaps, value themselves quite enough on their hardy habits, their independence of character, and their respect to the outward-moralities, might well learn something from their southern neighbours as respects the useful, the healthful, and the refined. The very variety of food at a peasant's table expands alike his desires, his mind, and his heart, and tends to raise him in the scale of civilisation. The man with so few wants that nature alone will supply them, whatever peculiar excellencies he possesses, can, as a man, be little better than a barbarian. Mind, we say nothing against the man—quite the reverse—who, well aware of the benefits and the pleasures from variety of food, voluntarily deprives himself of that gratification, in order that, by his self-denial and self-effort, he may attain a desired object. There is no occasion, however, for him to try to make the world believe that fine Grapes are as sour as Crabs, merely because his means or his purposes deny him the gratification of eating them. The Great Creator, in his goodness, presented us with wonderful variety of the useful and the beautiful, that we might thankfully and temperately enjoy them all. The man who is contented with the least tempting viands, when his means would command the more nutritive and enticing, can only secure our respect when we know the means thus saved are devoted to a noble purpose—such as helping those less prosperous than himself. We certainly shall be glad to know what progress is making in cottage-gardening in Scotland, especially as to the variety of vegetables cultivated. We clearly recollect that, in a large village, or rather town, north of the Forth, there was only one man who knew how to grow and how to treat a *Lettuce*. A greater attention to home comforts, even as respects the table, would do nothing to undermine the taste for intellectual studies; but it might help to give us less of the rough and the uncouth in association with the advancement of intellect.

Pricked out more *Lettuce*, watered *Canliflower* and young *Cabbages*, took up *Carrots* and *Beet*, and hunted for slugs, grubs, and caterpillars. Examined *Potatoes*. All in the ground should now be taken up, and those wanted for the new year should now be planted, with glass ready to put over them. Planted a piece of a pit with Dwarf Kidney Beans, where we can give a little heat; and cut the young fruit from young plants of *Cucumbers*, which we wish to produce a few in the beginning of winter, as of late we have given up growing them all the winter through. We would here state, however, in answer to a correspondent, that what was said lately of winter *Cucumbers* was just the result of our own practice. Had we nice plants coming on now, that we wished to bear plentifully about Christmas, and the new year and onwards, we would scarcely allow a fruit to swell before the middle of December.

FRUIT GARDEN.

Were we disposed to do anything in the way of transplanting, lifting, and planting, or even root-pruning, the dryness would deter us. In opening a ditch 30 inches deep for a fence in a meadow, the ground at that depth seemed quite dry and flaky. No pressure afforded any signs of moisture, and the lowest of it, when squeezed hard by the hand, could not be firmed together. Planting in such soil, without abundance of water, is out of the question; but preparations may be made, and in places where there is no such dryness, transplanting, root-pruning, &c., may now be proceeded with, as soon as the fruit is gathered. In planting young trees, and when they are to be moved only short distances, they will go on all the better, and make fresh

roots the sooner, if the operation is performed before the leaves lose their greenness, if there is the chance to syringe these leaves in a hot day, or to shade them from the hot sun. Where neither syringing nor shading can be given, the planting had better be delayed till the end of the month, as then moistening the foliage will be less required.

When the dryness prevents lifting and transplanting, much may be done in pruning and thinning the tops, both of trees to be transplanted, and of those that are established and intended to remain as they are. It is much more pleasant to do this now than in winter, and it will, by the admission of light and air, tell more upon the fruitfulness of the tree next season.

We have gathered all our Filberts, most of our Apples, a number of Pears, and all Plums except a few of Coe's Golden Drop, which ripened rather sooner than usual, as the tree was rather severely root-pruned last season. One advantage of this Plum is its hanging so long after it is ripe, and becoming all the richer if a little shrivelled at the stalk. Were we to state what we have been doing with other fruit we would merely be repeating what was said last week.

CHARRED-RUBBISH HEAP.

Took the advantage of the absence from home of the proprietor, and thus having smoke without annoyance, to have a large heap of prunings, roots, weeds, &c., placed together, and will cover with earth, so as partly to char, and then burn the remainder to ashes. To this heap are brought all the bad weeds, as couch grass, &c., as nothing settles them so well as burning them. We tread the heap of prunings as well as we can, and then, as leaf mould would be too valuable for a covering, we place a layer of litter and vegetable leaves all over before covering with earth and clay, which prevents the latter from falling into the middle of the heap. To make the heap more compact we frequently throw into it and over it, before the earth-covering, great lots of sawdust and refuse from the wood-yard, which thus become charred. Light where you will the heat will always reach the top, and for charring, the concealed fire must be brought down by degrees by boring holes until the base is reached. With a little care a great amount of charred matter may thus be obtained from a lot of rubbishy materials. But in such a heap if you wait until all is charred the charred matter will become less and less from the admission of air by chinks and crannies. It is best, therefore, to open such a heap when the bulk is charred, and then make a fire of the remainder, which will burn ever so much rough earth, clay, &c. A good portion of our heap will be small laurel prunings, and these when charred with other things are good for common purposes, but not so good for tender cuttings and plants in-doors if not previously well exposed to the air. Oak, Lime, and any common wood, except that of the resinous tribe are good for particular purposes, and a char heap of such wood must be carefully attended to that none of the heap may be burned into ashes.

FERMENTING-HEAP.

We have little grass to assist us this season, but all we could collect from the mowing and machining of the lawn, and the tree leaves that are falling a little prematurely, along with all the litter we could command, have been thrown into a heap to ferment, and will be found valuable in forwarding a few cuttings rather late in frames, and in helping various crops. Many things, even Lettuces, would do better in winter, and stand more air even in cold weather, if they had a foot or 18 inches of such a mixture beneath the earth in which the roots were placed. The only difficulty was procuring water to moisten the litter. In common seasons the grass would have done that admirably.

EARTH AND TURF-HEAPS.

Took the opportunity of a small meadow being planted to procure a lot of turf and earth, and will stack up the former in the manner previously indicated. It is so dry that it is hard work to take it up; but then it will come home light, and we must not miss the chance. Most probably we will let it lie roughly, and only build it in stacks when it is a little wet. In common seasons it is easy to moisten as we use it, and it will keep all the better and be more sweet from being piled up when rather dry. The gardener who never can obtain a bit of fresh turfy soil is much to be pitied, and scheme how he will his employers will ultimately suffer.

Some of our best gardeners think nothing of getting soil from a distance of many miles if it suits them, and the result will generally be seen in superior cultivation.

ORNAMENTAL DEPARTMENT.

Very much the same as last week. Proceeded with re-potting Pelargoniums, potting Primroses, Cinerarias, &c. The flower garden is still so fine, that we gave over taking things up, and will trust even Cloth of Gold a little longer. With north and east winds the nights have become warmer as the days are duller. Masses of Stella are still masses of gorgeousness. We will commence with Calceolaria cuttings next week.—R. F.

COVENT GARDEN MARKET.—OCTOBER 15.

Hothouse Grapes are very plentiful and of excellent quality, while of Pines there is a fair supply. Peaches are now scarce, but sufficient for the small demand which exists for them. Of Apples and Pears large quantities of excellent fruit are to be had; and in Plums a few Purple Gages are still to be met with. New Oranges are beginning to come in, the first cargo having arrived; and new Walnuts are seen in abundance. The vegetable market remains unchanged, and Potatoes are still heavy, the samples, it must be added, are remarkably healthy, the disease apparently dying out.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples ½ sieve	1	0	2	0	Mulberries punnet	0	0	0	0
Apricots doz.	0	0	0	0	Nectarines doz.	0	0	0	0
Cherries lb.	0	0	0	0	Oranges 100	10	0	14	0
Currants, Red... ½ sieve	0	0	0	0	Peaches doz.	3	0	12	0
Black do.	0	0	0	0	Pears (kitchen)... bush.	5	0	10	0
Figs doz.	1	6	2	6	dessert doz.	1	0	3	0
Filberts & Nuts 100 lbs.	60	0	80	0	Pine Apples lb.	4	0	8	0
Cobs do.	60	0	80	0	Plums ½ sieve	2	0	7	0
Grapes, Hamburgs lb.	1	6	4	0	Pomegranates each	0	4	0	0
Muscats 3	0	7	0	0	Quinces ½ sieve	2	0	4	0
Lemons 100	8	0	14	0	Raspberries lb.	0	0	0	0
Melons each	1	6	4	0	Walnuts bush.	14	0	20	0

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes each	0	4	0	6	Horseradish ... bundle	2	6	5	0
Asparagus bundle	0	0	0	0	Leeks bunch	0	2	0	0
Beans Broad... ½ sieve	0	0	0	0	Lettuce score	2	0	3	0
Kidney ½ sieve	3	6	5	0	Mushrooms pottle	1	6	2	6
Beet, Red doz.	1	0	3	0	Mustd. & Cress, punnet	0	2	0	0
Broccoli bundle	1	0	1	6	Onions bunch	0	4	0	6
Brussels Sprouts ½ sieve	2	0	2	6	pickling quart	0	6	0	8
Cabbage doz.	1	0	2	0	Parley doz. bunches	4	0	6	0
Capitums 100	1	0	2	0	Parasips doz.	0	9	1	0
Carrots bunch	0	5	0	8	Peas quart	0	0	1	0
Cauliflower doz.	4	0	6	0	Potatoes bushel	2	6	4	0
Celery bundle	1	0	2	0	Radishes doz. bunches	1	0	0	0
Cucumbers each	0	6	1	0	Savoy doz.	1	0	2	0
pickling doz.	0	0	0	0	Sea-kale basket	0	0	0	0
Endive score	2	6	4	0	Spinach sieve	2	0	4	0
Fennel bunch	0	3	0	0	Tomatoes ½ sieve	2	0	3	0
Garlic and Shallots, lb.	0	8	0	0	Turnips bunch	0	3	0	6
Herbs bunch	0	3	0	0	Vegetable Marrows doz.	2	0	3	0

TRADE CATALOGUES RECEIVED.

S. Ponsford & Son, Loughborough Park Nurseries, Cold Harbour Lane, Brixton, Surrey.—*Catalogue of General Nursery Stock; Select Catalogue of Dutch and Cape Flower Roots.*

André Leroy, Angers, France.—*Supplément au Catalogue de 1863; Tableau des Arbres Forestiers et d'Ornement déjà forts.*

James Veitch, Royal Exotic Nursery, King's Road, Chelsea, and Coombe Wood, Kingston Hill, Surrey.—*Catalogue of Hardy Trees, Shrubs, Coniferae, American Plants, &c. 1864-5.*

TO CORRESPONDENTS.

* * We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c., 171, Fleet Street, London, E.C.*

N.B.—Many questions must remain unanswered until next week.

CATERPILLARS ON CABBAGEWORKS (*T. Record*).—As far as we can discern from your brief description they are the offspring of two or more of the white cabbage butterflies (*Pontia brassicae* and *P. rapae*); and of the cabbage moth (*Mamestra brassicae*). Why they at one time preferred your neighbour's crops, and now have selected yours, defies our penetration. You have no remedy but hand-picking.

MOVING VINES FROM OPEN GROUNDS TO GREENHOUSE (Old Subscriber).—The best time to plant Vines is early in March, and you may move those intended for outside and inside planting at that time. One Vine to a rafter is quite sufficient when these are 8 feet apart, which is the proper distance, and quite close enough when plants are grown under them, so that you will have only room for nine Vines; but you do not say how you propose training them. Unless the Vines are better than out-door Vines usually are, we think they will do you little service for some time. Young Vines are preferable to old ones from any quarter, especially from out of doors, for the bad training has to be surmounted, and they do not usually push freely.

DECEASED PAXTONIANUM AND NOBILIS AFTER BLOOMING (James Hewitt).—They should not be cut down after blooming, as from their bases rise the future stems, and thus a kind of support is afforded to the young growths. Any that are old and dead may be removed.

POTTING ROSE CUTTINGS (Idem).—The best time to pot Rose cuttings inserted in September is April, affording them during the winter the protection of a frame and lights, or hand-glasses. Admit air in mild weather, especially when humid, and gradually harden them off by tilting the light or lights. By the middle or end of April they will be ready for potting, after which continue them in the frame for a time, keeping close for a week or ten days, and then admit air, gradually hardening-off by the end of May. They may then be planted out, or plunged in coal ashes, in an open yet sheltered situation, and repotted in September.

BEST PURPLE VERBENA—NASTURTIUM PROPAGATION (E. G. H.).—There is no better purple Verbena as a bedder than Purple King. Verbena venosa is a frame perennial, harder than many of the varieties from Melindree; but even it requires the protection of a frame, a dry spot, light soil, and the protection of mats, in addition to the lights in severe weather. In certain genial and sheltered situations it stands our climate. Nasturtiums generally may be raised from seed, but if of the better kinds of Tropaeolum, cuttings are preferable. You fail to ask specifically as regards the culture of Tropaeolum speciosum, and we cannot furnish answers when we do not know what is asked.

MYRSINAPHYLLUM ASPARAGOIDES CULTURE (M. D.).—Pot in a compost of turfy loam, fibry sandy peat, and leaf mould, in equal parts, with a free admixture of sand. Drain the pot to one-third its depth, and do not overpot the plant, employing a size that will cram the roots rather than allow room to spare. Grow in a greenhouse, and train as near the glass as possible; at all events select a light airy situation. When the plant commences growing water copiously, increasing from the commencement until the maximum is reached when the foliage is growing rapidly. After this give no more than is sufficient to keep the foliage fresh, and when this begins to turn yellow do not supply a drop for the next three months, and expose the foliage to all the light and sun heat possible. This will ripen the wood so well, and the eyes will be so well matured, that it will not fail to bloom with a continuance of such treatment, which is similar to the conditions which it enjoys in its native habitat—the Cape of Good Hope. It ought not to die down or be dried off until early autumn, but it may be treated so as to bloom at different periods of the year by varying the time of growth and rest.

HOTWATER APPARATUS FOR GREENHOUSE (Jane).—We have no experience of the stove you name, and we fear the lamps, unless there were a pipe to convey the vapour into the open air, would injure the plants. If you propose to employ gas try Clarke's new gas hotwater apparatus, which is highly spoken of by many who have tried it. If you have not gas at command try a small saddle boiler set at one end, the boiler inside but the furnace-door outside of the house, and connect with it four-inch flow and return pipes, and run them along about 1 foot from the front wall of the lean-to. This will afford sufficient heating power to prevent frost injuring any description of greenhouse plant, and you may have them in growth all the winter, as you wish. The next best plan is to have a furnace at one end and a flue along the front, which will be quite sufficient to keep out frost with a moderate fire.

REMOVING PINE SUCKERS (St. Omer).—We would remove the suckers now, and have them rooted plants before severe weather sets in. As they only serve to impoverish the parent, they might as well be removed at once. It is the practice of good Pine-growers to twist out the suckers that appear before the fruit shows with a pair of long-handled pincers, when the suckers can be fairly laid hold of, as when they are removed early the stem of the plant is not so likely to be injured as when they are allowed to remain until nearly the size of a fruiting plant. When Pines are planted out, as yours are (no new thing, by-the-by, in England), and when the sorts are such as arrive early at maturity, especially those of the Queen race, one, or, at the most, two suckers rising from the neck of the plant, or at a little beneath the soil, are allowed to remain on the parent. These grow until the fruit is ripe, when the parent is cut away, and the sucker grows amazingly, and not unfrequently in eighteen months produces a fruit larger than the parent. Should the suckers rise from the axils of the leaves at some distance above the soil, they, being illegible, are either twisted out with a pair of pincers as they present themselves, or have their hearts drilled out by thrusting a pointed square stick into them, and twisting it round several times, but not so as to injure the old plant.

BRANCHES OF EVERGREENS FOR BEDS IN WINTER (A Constant Reader, North Devon).—The parts most eligible for this purpose are densely-branched shoots of all evergreen trees and shrubs. There is not an evergreen that may not be employed in this way. Arrangement is a matter of taste, and that you seem to understand. As to their adaptability for the purpose specified, they are better than nothing, but after all look well for a time as the weather is wet or dry. The proper place for branches of all kinds not planted to strike root, or to serve some purpose other than that of living plants, is the rubbish-heap. To make a garden a cemetery is worse than having nothing in it, for neatness is superior to having faded autumn-tinted foliage in the beds all winter, and dead-looking plants in the spring.

ADMITTING AIR TO GRAPES (Idem).—In fine dry days the lights may be opened early in the morning, and remain open all day; but at night they should be closed before the heavy autumn dewa begin to fall, using fire by day only. If you can have a little air on at back without wet getting in at night by all means do so, otherwise the house had better be closed. It is a warm confined moist night air that is so injurious to Grapes hanging, and air at night, especially at this season, does more harm than good. We have in the press a book on Vine culture, which we think will suit you.

BOOKS (J. O., Bradford).—You can have Appleby's "Orchid Manual, for the cultivation of all kinds of Orchids," for thirty-two stamps free by post from our office; and the "Fern Manual" for sixty-four stamps.

LEAN-TO HOUSE FACING THE NORTH (T. T.).—If you had not been at the trouble of putting in front lights, and we suppose glass also, your north house would have made an excellent one for Ferns: as it is, it will do very well for that class of plants; and there are many interesting kinds that will endure a great deal of frost, which you may grow in Scotland in a house not heated. The house will also do very well for Camellias, and many hard-wooded plants will endure a great amount of cold, but we would not advise Heaths, as they like sun and air. Asaleas, however, will most likely do well with you, and the hybrid Rhododendrons will succeed admirably, while in spring and summer your house will be just suitable for flowering plants, as Calceolarias, Geraniums, and Balsams. If you determine on wintering Camellias and the like, do not be tempted to try an Arnot's stove in severe weather; rather cover up in any rough way, if it were even by throwing straw amongst the plants, and if they are frozen let them thaw slowly and gently, and the damage amongst hard-wooded plants will not be so great after all.

PEACHES AND NECTARINES ON A WEST ASPECT (Monmouth Subscriber).—There can be no question that Peaches and Nectarines would ripen with greater certainty under glass than without it; and as you wish to build such houses cheaply, we advise you to make the bulk of your roof a fixture, but to have some good large flaps at top as well as in front. Assuming the length of rafter to be 15 feet, we should say let 2 feet of that at top be on hinges to lift up by an easy contrivance, and the remaining 13 feet might be all a fixed roof. A small but neat bar of T-iron will support the glazing-bar from sinking if fixed from rafter to rafter in the middle. The front wall may be wooden boards almost its whole depth.

WINTERING TOM THUMB GERANIUMS IN A HAY-LOFT (T. H.).—You may winter them as you say, in a hay-loft, if there be light to it, but do not place them there until the weather is likely to set in frosty. If you have a cold pit with lights, and watertight, let them stand there as long as the weather is open and mild, say perhaps till the first week in December, covering up the frame at night when frosty, but giving air at all times when mild, keeping the plants dry, and checking growth by exposing them gradually to cold winds, so as to have them at rest, or nearly so, before setting them into the hay-loft. Cover up while there, if it be required, keeping them dry almost to withering, and remove them in March to some place where there is more light. If they are in pots let them remain so, and if potbound so much the better.

FRUITING VINES IN POTS (Idem).—If the wood appears ripe, and the leaves easily part from the shoots, they may be pruned at once. A small shoot or two at the top is of no particular consequence. It would, however, be better to let them remain outside after pruning for a little time, say a month or so, to harden, when they may be introduced into heat gradually. It would be better not to fresh pot them now, but place them in saucers or pans, and when fairly started feed them with liquid manure at times. Enlarging the pot at the present time will only cause the production of more wood, the fruit deriving but little benefit from it. Do not be in too great a hurry in forcing. We have seen many pots of Vines spoiled by being forced too early, the incipient bunch going blind, and producing no berries worth caring for.

APPLE AND PEAR TREES FOR ESPALIERS—PYRAMID PEARS (Yorkshire).—We think the espaliers would be profitable, and that the border of flowers in front next the walk will look well; but the flowers should be of low growth, and not planted nearer the trees than 2 feet, therefore your border should be at least 1 foot wider, or the trees planted that distance further from the walk. At the commencement the flowering plants may, of course, be planted wider in the spaces not covered by the trees; but for the fruit trees to do any good they must not be crowded by plants, but have free exposure to light and air. You may have the espaliers any height, but we prefer them 6 feet. Galvanised wire, if properly made, is preferable to ordinary wire, though the latter will answer well if kept painted. The wire may be stapled to wooden posts, which should be fixed firmly in the ground, and charred to the depth they are in the soil, and a few inches above it. Above the surface they should be well painted, or coated with boiling gas tar. The posts should be 2 feet in the ground, and the end ones double the strength of the inside ones. The first wire should be 1 foot from the ground, and the others 9 inches or a foot above it, which will make seven wires necessary. If you train the trees horizontally, the posts should be 20 feet apart for Pears on the pear stock, and 12 feet apart if on the quince. The posts for the Apples should be 20 feet apart for those on the crab stock, and 15 feet apart if on the paradise stock; and the trees of both Apples and Pears should be planted halfway between them. The two end posts may be made firm by driving a post 3 feet from them in a line with them outwards, and fastening a wire to them, and then to the first upright post 5 feet from the ground. The other posts are best secured by ramming the soil round them firmly. We would have the Apples on the paradise, and the Pears on the quince stock. Eleven Apple trees would therefore be required—say eight for baking and three for dessert—as you have a greater quantity of Pears. They may be—dessert Apples: Red Astrachan, Blenheim Orange, Golden Pippin, or Court of Wick. Kitchen Apples: Keswick Codlin, Nonsuch, Manx Codlin, Lord Suffield, Gravenstein, Waltham Abbey Seedling, or Golden Noble, Winter Pearmain, and Dumelow's Seedling. We would have the Pears on the quince stock at 12 feet apart, as stated. Thirteen trees would, therefore, be required. They may be the following, which come into season in the order in which they are named: Doyenné d'Été, Jargonelle, Colmar d'Été, Williams's Bon Chrétien, Louise Bonne de Jersey, Marie Louise, Thompson's, Forelle or Trout Pear, Hacon's Incomparable, Beurré Diel, Alexandre Lambré, Beurré d'Arenberg, and Beurré de Rancé. We presume that by dwarf standard Pear trees you mean bushes and pyramids, which are the most suitable for planting along the sides of paths in kitchen gardens. Standard trees shade other crops too much. We think your arrangement of the garden very good, and hope these hints may be useful; but if you want further advice do not hesitate about asking us for it. We never deviate from our rule of not recommending dealers.

VINE ROOTS INSIDE GREENHOUSE (J. J.).—If the roots be only covered with bricks to the width of the path, leaving a considerable surface bare, we do not think any great harm will result to the roots; but if you cover the whole of the surface inside they cannot be fed or watered, and will, besides, be shut out from air. It is usual in such cases to have a pathway formed of laths, which are moveable, thus facilitating the attention necessary to be bestowed on the border, which consists in watering when the Vines are active, so as to keep the soil in a healthfully moist state, and giving a mulching of 3 inches of short manure every spring, to be covered with an inch of loam to take away its untidy appearance.

PLANTING AN ORCHARD OF THREE ACRES (*A Subscriber*).—In giving advice of this kind somewhat more of your ulterior objects ought to be known than is given in your otherwise well-penned letter. We confess we are no particular admirers of closely-trimmed fruit trees anywhere excepting against a wall, espalier, or similar place. If we were, like you, near a fashionable watering-place, where there is a good sale for fruits in summer and early in autumn, we would trench the ground as you propose, plant standard Apples about 20 feet apart each way, and fill the ground between with Gooseberries or Currants at 5 feet apart, cutting away and removing these bushes as the Apple trees advanced, and eventually sowing the orchard with grass. If the situation is very windy, dwarf trees trained espalier might be substituted, and these may do much closer, say 2 feet apart. We would not, however, recommend miniature trees if a large quantity of fruit is wanted. We have seen several Apple trees the present season yielding forty bushels of fruit each, and it would take a great number of small bush trees to accomplish this, besides the trouble and expense of training the latter. As you confine your list to ten varieties, and believing you would do better by growing chiefly early sorts, we would recommend the following, the greater portion to be of the first-named, which are early: Devonshire Quarrenden, Kerry Pippin, King of the Pippins, Cellini, Blenheim Orange, New Hawthornden, Mapson's Seedling, and Lord Suffield, all summer and autumn fruits; and for late keeping try Golden Knob, Wellington, Winter Queening, or Court-Pendu-plat. For appearance in early summer, the Red Juneating, Red Astrachan, and Cox's Orange Pippin, are all good; while for early bearing, and the property of filling the basket quickly, the Keswick Codlin has few equals.—*J. R.*

GLOXINIAS GROWING IN A VINERY (*Ruby*).—Put them in February, keeping them until then in any kind of light soil in a dry part of the vinery, from which frost is excluded, and employing a compost of turfy loam and leaf mould in equal parts, with a free admixture of silver sand. Provide drainage to one-fourth of the depth, using pots two-thirds larger than the bulbs. Water sparingly until the growths appear, then give more gradually as growth progresses. If you have a hotbed you may plunge the pots in it, and grow these plants there for six or eight weeks, and thence remove to the vinery, and place on a shelf near the glass. *Thunbergia coccinea* do as any good requires a stove temperature, though it will do moderately in a temperature of not less than 45° in winter. *Boussingaultia baselloides* should do in a vinery, which is quite warm enough a place for it. It requires a compost of peat and loam in equal parts, with a free admixture of silver sand, abundant water when growing, but none when at rest, and all the light possible after the foliage has attained its full size, a free circulation of air being also afforded. You may keep the *Caladiums* named in a heated glass case, only they must not be too wet in winter: maintain a temperature of 55° to 60°. They luxuriate in a compost of turfy loam and leaf mould in equal parts, with a free admixture of sand.

VINES FROM EYES VERSUS LAYERS—**PLANTING OLD SMALL VINES** (*M. F.*).—Vines from eyes are preferable to those from layers, because the joints of the wood are shorter, and they have the advantage of going on progressively to perfection without any drawback: whereas layers are liable to receive a shock when detached from the parent, which prevents their growing freely for some time afterwards. It would not be judicious to plant in a permanent border Vines that have been in small pots for three or four years, and have thin old-looking canes, for they seldom take to the fresh soil well, and make correspondingly poor growths. Free, young, strong, healthy-growing canes, the thickness of the little finger, which were in the eye this spring, would make double the growth if planted next spring, and give a crop of Grapes the year following: whereas the others will be only recovering themselves preparatory for a start another year. For planting in permanent borders we prefer young moderately strong well-ripened canes to those that have been grown years in pots, even though strong.

DOUBLE SENECIOS (*W. Dillistone*).—Your double Senecios are very good; the one named *Magenta* very attractive in colour. Its dwarf habit is a great recommendation. The other varieties are too dark for bedding purposes. In our opinion Senecios are better adapted for pot culture as decorative plants. The variety *Magenta* is most desirable from its brilliancy of colour. Not having seen the plants growing, we can only speak of the propriety of names as applied to colour.

CUCUMBER-HOUSE—COLD VINERY (*J. H. C.*).—Your proposed arrangement will do for Cucumbers after the end of February. For winter supply you would require at least three pipes below the central bed, and three pipes on the coldest side of the house. A good arrangement for such a house would be a bed in the centre 4 feet wide, a walk on each side 2½ feet wide, and a shelf next the sides all round a foot wide. Did the house stand north and south, especially—but even as it does stand—we would prefer having a bed on each side, which, with middle walls, would take up 3½ or 4 feet, and thus leave a path down the middle of from 3 to 4 feet. Two four-inch pipes beneath each bed would then do, and two round the house for top heat. For winter work a third would be desirable for the coldest side, as the health of Cucumbers depends much on not overheating the heating medium. For a cold house we would have one Buckland Sweetwater, one Royal Muscadine, one Muscat Hamburgh, and the rest Black Hamburghs. For a house to be heated take the first three, two Hamburghs, one Muscat, and one Lady Downes.

SHOWING FUCHSIAS (*John Scott*).—Your specimens of Fuchsias arrived in a very bad condition. The names not being fastened to each specimen renders it difficult to recognise them. To do your seedlings justice we should see plants in flower. Presuming that the one with the pale mottled rosy purple corolla is *Loveliness*, we should say that was the best, although the sepals are rough. That with the large double white corolla, if free in flowering, would make a good decorative plant; the other specimens have no novelty about them. Much depends on the habit of the Fuchsia to render it useful. The *Petunia* is no advance upon many well-known named varieties.

NAMES OF FRUIT (*S. S.*).—2, Court-Pendu-plat; 3 and 4, Court of Wick; 5, Golden Pippin; 6, Robinson's Pippin; 10, Norfolk Beautif. Others not recognised. (*A. H.*).—6, Barcelona Pearmain; 7, Vicar of Winkfield; 8, Round Winter Nonpareil; 10, Scarlet Nonpareil; 11, Green Nonpareil; 12, Triomphe de Jodoigne. Others not recognised. (*Ten-years Subscriber*).—1, Forge; 2, Christie's Pippin; 3, Cellini; 4, Gravenstein; 6, Striped Beautif; 8, Golden Harvey; 9, Same as No. 10; 10, Same as No. 9; 12, Adams's Pearmain; Baking Pear, Black Worcester; 14, Same as No. 2; 15, Carel's Seedling. Others not recognised. (*East Retford*).—2, Golden Winter Pearmain; 4, Golden Noble; 7, Catilae; 9, Court of Wick; 10, Api Petit. Others not recognised. (*J. W., Southgate*).—Apples.—1, Gloria Mundi; 2, Blenheim Pippin; 3, Dutch Mignonne; 4, Scarlet Nonpareil;

5, Ribston Pippin; 6, Court-Pendu-plat. Pears.—1, Napoleon; 2, Marie Louise; 3, Beurré de Rance; 4, Easter Beurré; 5, Beurré Diel; 6, Beurré d'Arenberg; 7, Fondante d'Automne. Others not recognised. (*N. F. H. H.*).—1, Marie Louise; 2, Beurré Diel; 3, Passe Colmar; 4, St. Germain; 5, Catilae; 6, Williams's Bon Chrétien. (*H. P.*).—Your Apple is Cox's Golden Drop.

NAMES OF PLANTS (*Lex*).—*Cyanotis vittata*. (*Leaflet*).—It is quite impossible to name your plants from pieces of leaves only: we must see the flowers. (*Constant Reader*).—*Juniperus communis*. (*J. M. K.*).—The plant with a prickly pointed leaf is *Ruscus aculeatus*. The other two are not in a nameable state. (*Mary*).—*Mesembryanthemum cordifolium*.

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

POULTRY-CLUB MEETING.

(From a Correspondent.)

THE half-yearly meeting of the Poultry Club was held in the board-room at the Agricultural Hall, Islington, on the 1st inst., when about twenty members were present. Upon the motion of Mr. Beldon, Mr. Kelleway took the chair. The following new members were then elected:—Messrs. J. E. Powers, H. Lacy, W. J. Pope, J. Fletcher, J. Crosland, jun., W. Guerrier, J. Smith, J. Anderson, A. Crook, C. Priest, H. Bates, — Colley, F. W. Elae, M. Headley, J. Monney, and W. B. Tegetmeier.

Mr. Zuerhorst gave notice of motion, respecting the absence of the minute-books, &c., of the Club, for the next meeting.

Mr. Beldon said, that with respect to the book of rules for judging, he considered that the dissatisfaction shown at the principle out of doors was due to a misapprehension of their purpose. The rules laid down were really a standard of excellence for the guidance of exhibitors. It was absurd to think that the Judges were to make their awards books in hand; but any flagrant violation of the acknowledged standard of excellence by a Judge would entail an explanation from him by the Stewards. Mr. Beldon, to remove the only possible point of opposition to the Club, moved that the name be altered to "A Standard for the Guidance of Poultry Exhibitors." This being seconded, was unanimously adopted. It was stated that the revised edition would be ready in a few days, and each member immediately supplied with a copy.

A long discussion took place about a monthly periodical on poultry matters; but from the experience of some members present it was not deemed advisable, it being certain to entail a pecuniary loss.

The appointment of the Judges at Birmingham was next brought forward, and it was resolved to memorialise the Committee that if they still appointed some of their old Judges they would select fresh ones to act with them in whom exhibitors had confidence.

The next meeting was fixed for the Monday of the Birmingham Show at the Bingley Hall Tavern at three o'clock. The meeting then dispersed after passing votes of thanks to Mr. Kelleway, the chairman, and Mr. Ashton, who acted as secretary.

TUNBRIDGE WELLS POULTRY SHOW.

WE are always glad to note progress of poultry in connection with agriculture. It is a natural thing, and the association is therefore a correct one. The good people of Kent are not slow in learning. Last year was the first exhibition of the sort they have had, and they have soon applied the lesson which they then had placed before them. From its soil, its contiguity to London, and from tradition, Kent should be, as it was formerly, one of the chief poultry providers of the London market. Many villages and places retain in name an old reputation. We recollect when Westerham was famous for its breed, just as Le Mans and La Flèche are for theirs in France; and Handcross, Cuckfield, and Dorking are here.

There was a great increase in Dorkings, Geese, Ducks, and Turkeys—all among the most useful and marketable of the dwellers in the yard, or on the farm. The progress was not confined to the numbers, it was as perceptible in the quality. Many of the birds shown were fit for any exhibition in England, and would hold their own creditably anywhere. There were twenty-one pens of Dorkings, many of them most excellent. The Rev. Mr. Barnes showed three

pens, taking first and second, and a high commendation. The first-prize pen sold readily for ten guineas. We have seldom seen two better pens; but there was the old mistake. If the cock from the second-prize pen had been put with the first-prize pullets, it would have been an improvement. Mr. Simmons's birds were very good. Eight pens were deservedly mentioned. The *Polands* and *Spanish* do not seem to grow in public estimation. We imagine much of this may be attributed to the fact, that non-sitters are troublesome birds on a farm. They involve the necessity of keeping two breeds, and these are tiresome to keep distinct. If they are allowed to mingle, then we soon come to the abomination of all abominations—the strange creature called a “barn-door fowl,” an “olla podrida” made up of a small contribution from *Spanish*, *Poland*, *Dorking*, *Game*, “and many others, which now to describe would be too long.” The idea is suggested to us by having before our eyes while we write, a picture, by a Flemish master, said to possess considerable merit. The cock is yellow and white with blue legs, he has a lark crest, and a cup comb; one hen is white with a splashed topknot; another is black all over, she is also crested; another hen is brown and white—all have dark legs. In the country where this was painted they are still called “Boor’s fowls,” and invoiced as such when sent over for sale. A pure breed is more valuable, and quite as useful. The food consumed by one of these equals in expense the consumption of a pure bred and good fowl. One is worth on table, or in the market, twice as much as the other, and surely uniformity and harmony of colour and markings shall be worth something in the yard. *Hamburghs* were poorly represented in numbers; but Mr. Brassey, who took nearly all the prizes, did so with good birds, especially the Golden-pencilled. We question whether it would not be well another year to give fewer prizes for the *Hamburghs*, and more for the *Dorkings*. In the “various class,” Mr. Brassey was successful with some good *Crève Cœurs*. There seems to be a speciality at this Show for good *Duckwings*. All the *Game* were excellent, these especially. Mr. Gee took both prizes. Messrs. Cheney and Simmons showed good *Bantams*.

The *Turkeys* were very meritorious. Lord Abergavenny took both prizes, hard run by Sir Walter James.

Geese were excellent, especially Mr. Sharp's first-prize pen of *Toulouse*. Mr. Wyer also showed heavy birds.

Aylesbury Ducks were a good, but not an even class. Mr. Gee's birds which took both prizes had an easy victory, on account of the excellence of their points; but there were larger birds with yellow bills, and one pen of very good *Ducks* slightly foul-feathered. *Rouens* were another good class, and brought deserved honours to Messrs. Sharpe and Field. Another, and in our opinion, a very useful class at an agricultural show, was one for “any other *Ducks*.” Some very large birds were shown. Mrs. Cramer Roberts took first, and Lord Abergavenny second.

The Show is held in a lovely spot, and was favoured with beautiful weather. Like most agricultural shows, it is a holiday, and a source of enjoyment to all. The Committee is a painstaking and active one, deserving the success they meet, and Mr. Richardson is an urbane and excellent Secretary.

Mr. Baily, Mount Street, Grosvenor Square, was the Judge.

LONG SUTTON POULTRY SHOW.

THE first annual Show of Poultry and Pigeons was held on the 12th inst., and was in every respect a great success, many of the birds being of great merit. Amongst the number may be mentioned the *Spanish*, shown by Mr. W. Massey, Gedney; Silver-pencilled *Hamburghs*, by Mr. T. J. Saltmarsh, Chelmsford; and *Brahma Pootras* by Mr. E. Sherman, Chelmsford. A fine pen of Silver *Polands* were well shown by Mr. G. Boothby, of Louth; and an exquisite pen of *Game Bantams* by Mr. G. Clarke, of Long Sutton.

A good collection of *Pigeons* were shown, the prize pens being of extraordinary merit.

The entries numbered 136 pens. Upwards of £18 was taken at the door, though the admittance was only 6d. each until four o'clock in the afternoon, when the Show was opened free.

It is the intention of the Committee to publish a much more extended prize list another year, as they now have the patronage of the members for the county and the gentry of the neighbourhood. We wish it success.

DORKINGS (Any colour).—First, J. A. Clarke, Long Sutton. Second, J. Vorley, Holbeach. Highly Commended, G. Boothby, Louth; Mrs. J. Clarke, Long Sutton.

GAME (Any colour).—First, Miss Kemp, Fleet. Second, H. Snashall, Gedney.

SPANISH.—First and Second, W. Massey, Gedney.

COCHIN-CHINA (Any colour).—First, Mrs. W. Massey, Gedney. Second, E. Gregory, Leverington. Highly Commended, I. Whitset, Holbeach. Commended, P. Hutchinson, Spalding.

HAMBURGH (Any colour).—First, T. J. Saltmarsh, Chelmsford. Second, W. Stevenson, Gedney Marsh. Highly Commended, T. J. Saltmarsh. Commended, G. Lee, Gedney.

ANY VARIETY NOT NAMED ABOVE.—First, E. Sherman, Chelmsford. Second, G. Boothby, Louth.

GAME BANTAMS (Any colour).—First, G. Clarke, Long Sutton. Second, R. Swift, Southwell. Commended, J. Barnes, Peterborough.

ANY FARMYARD CROSS.—Prize, G. Clarke, Long Sutton.

MARKET CHICKENS OF 1884.—First, J. A. Clarke, Long Sutton. Second and Third, J. Vorley, Holbeach. Commended, W. Oliver, Long Sutton. Mrs. J. Clarke, Long Sutton.

DUCKS (Any variety).—First, J. Eno, Long Sutton. Second, J. G. Hobson. Highly Commended, W. Wright, Sutton.

TURKEYS (Any colour).—First, Mrs. Harris, Sutton. Second, W. Wright. Highly Commended, T. Snashall, Gedney.

GESE (Any colour).—Prize, B. Day, Sutton.

SINGLES COCK (Any Breed or Cross).—First, E. Sherman, Chelmsford. Second, J. Vorley, Holbeach. Third, G. Manning, Springfield.

FANCY PIGEONS.—First, Mrs. W. Massey, Gedney. Second, W. Massey, Third, D. Woodhouse, Nottingham. Highly Commended, I. Whitset, Holbeach; P. Hutchinson, Spalding.

BEST RABBIT.—First, Master F. Medd, Long Sutton. Second, Miss Bennett, Long Sutton. Third, W. Beatty, Long Sutton. Highly Commended, G. Manning, Springfield.

BEST THREE RABBITS.—Prize, D. Osborne, Long Sutton.

Mr. James Monsey, of Norwich, officiated as Judge.

WORCESTERSHIRE POULTRY EXHIBITION.

THE Committee of the Worcester Poultry Show have just held their ninth annual meeting in the Corn Exchange of that city. A more excellently adapted building for every purpose of a moderate-sized show it is difficult to imagine, as it is not only well lighted, but ventilated in a manner so perfect as to leave nothing to be desired. Thanks to the persevering and very strenuous exertions of Mr. John Holland, from whom many more assuming exhibitions might with profit take copy, everything passed off quite pleasantly and in order, each duty being fulfilled in the time originally appointed, thus creating none of those unexpected delays, and consequent after-bustle and hurry to make up lost time, to which cause alone not a few of our poultry meetings may entirely attribute their eventual failure. It is an equally gratifying result to find that not only did the entries of poultry on this occasion outnumber by more than twenty pens even the largest of the eight preceding Worcester Shows, but it is equally important to note down, that the quality of the birds exhibited was a decided improvement over those hitherto competing.

With these few well-deserved remarks, we will now proceed to make a few observations on the classes generally. *Game* fowls headed the lists, and here from evident inattention to the rules of the prize schedules, two most excellent pens were disqualified for exhibiting one pullet and cockerel in the stead of a pair of pullets and cockerel. Too much careful attention cannot be devoted by intended exhibitors to the rigid examination of each particular prize list, as it by no means follows that the rules of one society should tally precisely with those of similar meetings in the neighbourhood. Vexation and annoyance must ensue, although the blame rests beyond question at the doors of those parties only who have by mischance made a false entry, for the rules and regulations must always be strictly enforced without favour or affection to any one. In the *Game* classes a great and somewhat general drawback arose from the cockerels having been so recently “dubbed” as to be still suffering depression from this operation. It is an unwise step to subject them to the increased suffering of a poultry show until perfectly recovered. There were several cockerels, however, exhibited, that in a few weeks to come will show in greatly improved condition. The *Spanish* class was a remarkably good one, but it was obvious to any one at all conversant with poultry culture that several of the so-called pullets exhibited were birds indisputably of far greater age than represented. It is not

frequently that so good a class is met with at any local show as were the Grey Dorking class at Worcester; and we noticed, also, some especially good White Dorkings in another part of the Exhibition. One of the triumphs of the Worcester Show, however, centred in the classes for *Cochins*, all three of these classes were far beyond general expectation, and the competition was necessarily most severe. This remark will apply with equal force to both the Buff, Partridge-coloured, and the White Cochins. Some unusually good *Brahmas* were exhibited in their class, and some very fair specimens were also shown of this variety in the "selling class." In *Hamburghs* the Golden and the Silver-spangled breeds were shown in numbers and quality that left little to be desired; the Silver-pencilled ones, for which this neighbourhood has been for so many years celebrated, were an exceedingly good class, and the Silver-spangled *Polands* and the Black *Polands* were equally praiseworthy. In the Any variety class were shown first-rate Silky fowls, Malays, Andalusians, Black *Hamburghs*, and White Dorkings. The Sebright *Bantams* were decidedly superior to those that have been of late years exhibited, and the White and Black *Bantams* were also good.

In *Geese* and *Ducks* Mrs. Seamons was as usual quite at home in the prize list, and left very little for division among the remaining competitors. Sir St. George Gore, however, sent a pen of exceedingly good-plumaged Carolina Ducks. Thos. Harvey Dutton Bayley, Esq., exhibited his unapproachable pen of Grey Call Ducks; whilst the display of Buenos Ayrean Ducks was a show in itself, and this class consequently was one of the most interesting portions of the whole exhibition. The "selling class" consisted of over forty pens, many of which at once changed hands from the very limited price enforced upon them by the conditions of the prize schedules; in fact, it drew forth quite a competition among intending purchasers, and proved beyond question one of the most remunerative classes to the Committee that appeared on their list of premiums.

No Pigeons were exhibited at Worcester, and the withdrawal of encouragement this year from so popular a portion of such meetings might possibly well deserve reconsideration on future occasions.

The weather very luckily turned out most favourable, and a band of the Volunteers, placed on a stage outside the entrance, proved very attractive.

GAMES (Black or Brown-breasted Reds).—First, Sir St. G. Gore, Bart. Hopton Hall, Wirksworth, Derbyshire. Second, J. Cook, Worcester. Highly Commended, W. K. Duxbury, Leeds.

GAMES (Duckwings and other Greys and Blues).—First, E. Aykroyd, Bradford. Second, Sir St. G. Gore, Bart., Wirksworth. Highly Commended, A. B. Dyas, Madeley, Salop.

GAMES (Any other variety).—First, J. Cook, Worcester. Second, E. Winwood, Upton-on-Severn.

GAMES COCKBREDS (Any variety).—First, Sir St. G. Gore, Bart., Wirksworth. Second, T. Statter, Whitefield, Manchester. Highly Commended, Mrs. Hay, Sudbury, Derby. Commended, J. Holme, Knowsley, near Prescott; A. B. Dyas, Madeley, Salop; T. Dyson, Halifax.

SPANISH.—First, E. P. Holden, Walsall. Second, G. Lamb, Compton. Highly Commended, E. Brown; W. Rona, Bristol. Commended, W. Bradley, Worcester; A. Heath, Calne, Wilts; W. K. Duxbury, Leeds. **DORKINGS (Coloured).**—First, J. White, Northallerton. Second, Sir St. G. Gore, Bart., Wirksworth, Derbyshire. Highly Commended, Rev. J. F. Newton, Kirby-in-Cleveland; Mrs. Pettat, Basingstoke; Mrs. Young, Stratford-on-Avon; J. Hill, Burton-on-Trent. Commended, Rev. M. Amphlett, Evesham; E. Tudman, Ash Grove, Whitechurch, Salop.

COCHIN-CHINA (Cinnamon and Buff).—First, H. Bates, Birmingham. Second, G. Fell, Warrington. Highly Commended, Rev. W. C. H. D'Aeth, Arbrofield, Reading; H. Bates.

COCHIN-CHINA (Partridge and Grouse).—First, T. Stretch, Ormskirk. Second, E. Tudman, Whitechurch, Salop. Highly Commended, P. Cartwright, Oswestry. Commended, C. H. Walsfield, Malvern Wells.

COCHIN-CHINA (Any other variety).—First, E. Chase, Balsall Heath, Birmingham. Second, W. Dawson, Hopton Mirfield. Highly Commended, F. W. Zorhorst, Donnybrook, Dublin; G. Lamb, Compton. Commended, Mrs. St. John, Basingstoke.

BRAMA POOTRA.—First, P. Statter, Manchester. Second, J. K. Fowler, Aylesbury. Highly Commended, Mrs. Seamons, Hartwell, Aylesbury. Commended, J. Pares, Chertsey.

HAMBURGERS (Gold-pencilled).—First, J. Robinson, Vale House, Garstang. Second, Rev. E. Roy, Worcester. Highly Commended, J. Fielding, Newchurch; F. Pittis, Newport, Isle of Wight.

HAMBURGERS (Silver-pencilled).—First, Sir St. G. Gore, Bart., Wirksworth. Second, J. Robinson, Garstang. Highly Commended, Rev. E. Roy, Worcester; T. W. Walsh, Worcester. Commended, F. Foxwell, Worcester; D. Illingworth, Burley, near Otley.

HAMBURGERS (Gold-spangled).—First, E. Boynes, Keighley. Second, J. Leach, Newcastle. Highly Commended, Sir St. G. Gore, Bart., Wirksworth; G. Brook, Huddersfield. Commended, T. May, Wolverhampton.

HAMBURGERS (Silver-spangled).—First, E. Collinge, Clough Middleton. Second, Sir St. G. Gore, Bart. Highly Commended, T. Davies, Newport, Monmouth; J. Fielding, Newchurch; G. Whitcombe, Twigworth Villa, near Gloucester.

POLANDS (Gold or Silver).—First and Second, G. C. Atkins, Lightwoods, near Birmingham. Highly Commended, Mrs. Blay, Worcester.

POLANDS (Black, with White Crests).—First, J. Smith, Keighley. Second, H. Carter, Upperthong.

ANY DISTINCT VARIETY NOT INCLUDED IN THE ABOVE CLASSES.—First, Rev. P. W. Storey, Daventry (Silky Fowls). Second, J. Robinson, Garstang (White Dorkings). Highly Commended, Rev. G. F. Hodson, North Petherton (White Dorkings); Mrs. Blay, Worcester (Andalusians); W. K. Duxbury, Leeds (Black *Hamburghs*); J. Hinton, Hinton, near Bath (Malays).

GAMES BANTAMS (Any variety).—First, C. W. Brierley, Middleton; Second, J. H. Turner, Sheffield. Highly Commended, Sir St. G. Gore, Bart., Wirksworth; J. Croeland, jun., Wakefield; J. Mann, Shawlough.

BANTAMS (Gold or Silver-aced).—First and Highly Commended, M. Lemo, jun., Dunstable, Beds (Silver-aced). Second, Rev. G. F. Hodson, North Petherton (Gold-aced). Highly Commended, Mrs. Pettat, Basingstoke, Hampshire; R. Adams, Birmingham. Commended, T. C. Harrison, Hull.

BANTAMS (Black or White).—First, T. Davies, Newport, Monmouth. Second, J. P. Gardener, Rugeley. Highly Commended, F. Pittis, jun., Newport, Isle of Wight. Commended, Sir St. G. Gore, Bart.

TURKEYS.—Second, Mrs. Wolferstan, Tamworth.

GOULINGS.—First and Second, Mrs. Seamons, Aylesbury. Highly Commended, C. R. Powys, Wallingford. Commended, Mrs. S. R. Herbert, Powick, near Worcester; R. Rees, Aberystwyth; W. K. Duxbury, Leeds.

DUCKS (Aylesbury).—First, Second, and Highly Commended, Mrs. Seamons, Aylesbury. Highly Commended, E. Shaw, Oswestry.

DUCKS (Rouen).—First and Highly Commended, Sir St. G. Gore, Bart. Second, T. Statter, Manchester. Highly Commended, Mrs. S. R. Herbert, Powick, near Worcester; J. K. Fowler, Aylesbury; W. Gamon, Thornton-le-Moors; W. Stephens, Higham Green, Gloucester. Commended, J. K. Fowler, J. Holme, Knowsley, near Prescott; J. Robinson, Garstang.

DUCKS (Any other variety).—First, Sir St. G. Gore, Bart. (Carollinas). Second, T. H. D. Bayley, Biggleswade, Beds (Grey Calls). Highly Commended, Mrs. Pettat, Basingstoke, Hampshire (Wild Ducks); Miss Clifton, Whittingham, Worcester (Buenos Ayrean); J. E. Jessop, Hull (Wild Ducks); T. Statter, Manchester (Buenos Ayrean); F. W. Earle, Edenhurst, Prescott (Buenos Ayrean). Commended, Capt. Edgell, Road, near Bath (White Call Ducks); C. W. Brierley, Manchester (Grey Calls); J. E. Jessop (Buenos Ayrean); J. K. Fowler, Aylesbury (Buenos Ayrean).

A SELLING CLASS.—First, W. Holland, Pershore (Silver-pencilled *Hamburghs*). Second, Sir St. G. Gore, Bart. (Golden-spangled *Hamburghs*). Highly Commended, A. B. Dyas, Madeley, Salop (White Game); W. K. Duxbury, Leeds (Golden-spangled *Polands*); Rev. E. Roy, Worcester (Golden-pencilled *Hamburghs*); T. Fletcher, Great Malvern (Silver-spangled *Hamburghs*); Mrs. Blay, Worcester (White Muscovy Ducks). Commended, E. H. Nicholas, Malpas, near Newport, Monmouth (Grey Dorkings and White Cochins); J. Hinton, Hinton, near Bath (Silver-spangled *Polands*); T. W. Walsh, Worcester (Silver-pencilled *Hamburghs*); T. Fletcher (Friszled Fowls); W. Bradley, Worcester (File Game Fowls); J. Robinson, Garstang (Grey Dorkings and Silver-spangled *Hamburghs*). E. Pigeon (Dark *Brahmas*).

Edward Hewitt, Esq., of Eden Cottage, Sparkbrook, Birmingham, officiated as the Arbitrator.

COWS ROBBED OF THEIR MILK.

ALTHOUGH I agree with you that "J. J. T.'s" cow (see page 301), was not milked by a hedgehog, I cannot unhesitatingly conclude that the milk was taken by a hand.

My attention was lately attracted to a cow lying in a meadow by the somewhat strange posture of the animal. Going up to her to see what was amiss, I found her quietly sucking one of her own teats. She was in a wretchedly poor condition, and a countryman who stood by remarked, "She's a'most sucked herself to death."

If, as I suspect, "J. J. T.'s" cow has a similar habit, his man may convict her in the theft by looking at her mouth, even if he cannot succeed in catching her in the act of stealing her milk.—EDWARD LESTER, *Borstal*.

BOOK ON BEE-KEEPING.

FROM a short report in your Journal of the Entomological Society's Meeting, it appears that the letters of the *Times*' Bee-master have been condemned and deplored as full of inaccuracies and errors the most ridiculous and disgraceful. Nor is the evil which has been inflicted on the public to stop here—we are to have a "book" from the pen of that celebrated writer—a book in which if we find some truth we may also expect to find the exploded notions of our forefathers reproduced with many mistakes and blunders of the tyro.

Now for this bane, whose evil influence will be diffused far and wide, there ought immediately to be provided an antidote—and who so able for the task as the "DEVONSHIRE BEE-KEEPER?" I believe that gentleman can produce a work on bee science and husbandry worthy of the age; and if he will set himself to the task, I have no doubt he will receive the countenance and support of every British apiarian.

A book scientific and practical, embracing the most recent physiological discoveries, and all the newest and best methods

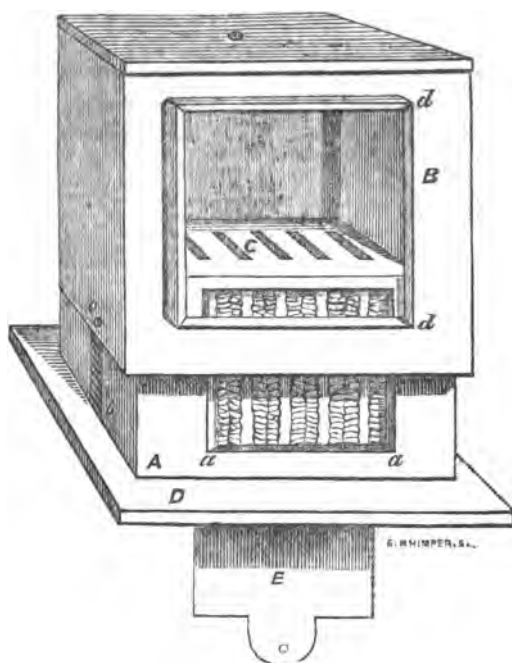
of managing bees, is a want with which the public has not yet been supplied.

Will Mr. Woodbury respond to a request which I in common with many others now make?—E. S.

BOXES AND SUPERS.

In No. 182 of your New Series of THE JOURNAL OF HORTICULTURE, I find an article on comb-pruning by your valued correspondent, Mr. S. Bevan Fox, and in that article allusion is made to one of his hives, No. 7, a box adjuster-hive, from which in the year 1863 he took a super of 30 lbs., and in the present year, 1864, another of about 40 lbs. Now, as I am a bee-keeper, not, indeed, on a very large scale, I should be glad if your correspondent would furnish me with the dimensions of the stock-hive, and also those of a super to hold 30 or 40 lbs. of honey, likewise what must be the minimum inside measure of a wooden box-hive to contain sufficient honey to carry a good swarm through the winter.—A. K. H.

[The adjuster-hive was originally invented by Mr. G. Fox, of Kingsbridge. I gave a full description, accompanied by a diagram, of the one then in use by myself, at page 99, of No. 555, Vol. XXII., published May 17th, 1859.



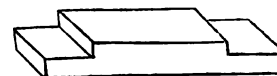
As it is possible that "A. K. H.," may not possess a copy of THE COTTAGE GARDENER of that date, I here sketch out a short description of the hive, which I hope may suffice to show him the principle both of its construction and management.

The dimensions now given slightly vary from those of the previous account, but are, I think, in every way an improvement.

The stock-box A is 12 inches square, by 8½ inches deep, inside measure. It is made of ¾-inch yellow deal (or ¾-inch when planed), well and truly dovetailed together, and as additional security, pinned at each corner by two pins of iron wire 4½ inches long, meeting about the centre, previously having bored with a fine gimlet. A rebate of ¾-inch in depth by ½-inch wide, is run along the upper edges of the back and front. The bars, eight in number, which are 12½ inches in length, by ¾-inch wide, and ¾-inch thick, are sunk in notches of the same width and depth, so that there will be a space of three-eighths of an inch between the bars and the adapter or cover. The bars should also be constructed with shallow ribs of about ¼-inch square, on the under side, after the fashion of the Woodbury ribbed comb-bar. A thin coating of melted wax should be applied to

these ribbed surfaces previous to a swarm being hived in the box.

C is a thin board clamped at the ends, used as an adapter and top. This is fastened to the box by well-greased screws, which must be carried through the clamps only. There are two slits 8 inches long by ¾-inch wide, on each side, corresponding with two of the openings between the bars. These are best made towards the two sides, leaving no communication near the centre. When the super is not being worked these slits for communication are closed by two pieces of wood about 3 inches wide, which are slipped gently along from one end to the other, so as to avoid crushing bees. The super B must be made with great nicety, just large enough in the square to slip down over the stock-box A, or about 18½ inches square, by from 12 to 15 inches in depth, according to the honey district. This is also furnished with eight bars 1½ inch in width, either formed and fixed like those in the lower box, or made of ¾-inch stuff, a piece of 24 inches long by ¾ inch deep being cut out of the top part of each end of the bar, thus—



It is hardly necessary to say that the top and adapter of the inner box must be made perfectly flush with the outer dimensions of the same.

The window in the stock-box, 7 inches in length by 4½ inches in depth, is darkened by a shutter of stout zinc, sliding upwards from below through a slit cut in the floor-board, and working in grooves covered by narrow slips of the same metal sunk its own thickness into the wood. The window in the super is of somewhat larger dimensions—say 10 inches high by 7 inches wide, and may be closed in any manner according to the fancy of the owner. In all cases of bar-hives the glass must be fitted, as nearly as possible, flush with the inside of the box.

The floor-board D is made of 1½-inch stuff about 18 inches square, strengthened by two cross pieces dovetailed and driven in tight about 4 inches from each side. It is advisable to screw the bottom board to the stock-box, otherwise it would be difficult to take off the super without lifting the inner box. The screws must pass through the cross-bars, a mortice being cut in the floor-board proper to allow of play backwards and forwards as the grain contracts or expands, according to the dryness or moisture of the atmosphere. Bee-keepers will do well to attend to this simple affair in the manufacture of all box-hives, as otherwise the sides of the box are strained and started from their fastenings; but it is particularly necessary as respects the hive under consideration.

The entrance is 6 inches long by ¾-inch high, and is cut in the upper surface of the floor-board. It is contracted when desirable by moveable wedges, or by a slide. There is an alighting-board attached.

During winter, or at any time that the super is not being filled, it must be kept in its proper place over the stock-box, itself being intended to form the outer case. A moveable roof of wide dimensions is advisable. This may be made to fit the top of the super.

To work this hive the stock-hive is supplied with a swarm in the usual way. A few bits of clean worker comb attached to the bars will assist in promoting straightness of comb-building. If none is at hand the waxed ribs must be trusted to. The following season, or the same if the hive becomes well filled, the slips of wood are removed from the adapter, and the super let down to the floor-board. There will be a space of a few inches for the bees to commence operations in. Some clean guide combs should, if possible, be attached to the bars to induce them to do so. When the bees are fairly at work, and as the space allotted them becomes occupied with combs, the super should be raised an inch, being retained in its place by small blocks of wood. A rack and spring on each side used to be the means adopted for this latter purpose, but as it never seemed quite secure, the blocks of wood were substituted. As the work of filling goes on, the super must be raised little by little, suitable blocks being at hand. Two persons are necessary to effect this, and to remove the super at the end of the season. Some little exercise of judgment is requisite in deciding when these several raisings ought to be made. If delayed

too long the combs will probably be attached to the adapter, and a fracture is the consequence. If effected too rapidly, or beyond what the honey season will warrant, a quantity of empty or half-filled combs is the result. A little experience will teach the owner better than any written directions.

I have had a hive of this construction in pretty constant use for about fourteen years, tenanted by various swarms. I cannot be sure of the quantities of honey obtained from it prior to 1888. In that year a super of 80 lbs. was taken; in 1889, one of 53 lbs., of particularly beautiful honey, and in subsequent seasons it afforded results already detailed in No. 182 of the present series.

Mr. G. Fox, the summer after first stocking this hive of his invention, obtained a splendid super of more than 66 lbs. It is remarkable that only once have I ever known brood to be found in the super. This may be accidental, but I wish I could report the same of other supers.

The hive has its faults, the chief being that a bee dress is generally requisite when carrying out any of the before-mentioned manipulations, as well as an additional pair of hands when removing the super. But as a remunerative hive under the management of one who understands it, I do not believe it has any superior, if it has its equal.

With respect to the second query of "A. K. H.," as to the dimensions of supers calculated to hold from 80 lbs. to 40 lbs. of honeycomb, an octagonal super of 13 inches in diameter by 8 inches deep, will contain about the latter quantity. I am very partial to shallow square supers constructed to carry the same bars, which fit into the frames in use in my frame-hives. These boxes are about 13 inches square, by depths varying from 3½ to 5½ inches, inside measure, including the bars. One of these boxes is first given, and when tolerably well filled with combs, an empty one, without the bars, is placed between the stock and the super. The combs are extended into the second box, and here is a modification of the adjusting principle at once. By this plan I have obtained some of my largest and best supers, from 54 lbs. in weight downwards.

The best dimensions for wooden stock-hives are 13 inches square by 8 inches deep. A smaller-sized box would, doubtless, contain enough stores to carry a colony through the winter; but more than this is required, there must be sufficient capacity for the breeding powers of a prolific queen, and the storing of large quantities of pollen. This being deficient, it is useless to expect the bees to confine their breeding quarters to the stock-hive; but they will ascend for that purpose into the supers. That small stock hives are a great mistake has long been the opinion of—S. BEVAN FOX, *Master*.]

BEEES ARE CARNIVOROUS.

In the Number of your valuable Journal for September 20th, a correspondent, "A. W.," seems to be quite incredulous about my experience of the carnivorous propensities of the honey bee. Since then I have received a strong testimony in favour of the correctness of my theory. A lady in my neighbourhood has been most successful in preserving and increasing her stock of bees during the last three inclement seasons, when every one else in the vicinity lost all or nearly all theirs. Being anxious to know how she managed her hives, I called on her and asked how she fed her bees in winter. Her reply was, "Almost entirely on meat—any scraps of fresh meat left after our dinner, such as chicken bones, limbs of ducks or other fowls, bits of roast beef with the gravy in them, as bees like underdone meat." "Don't you put sugar or something sweet in it?" said I in a rather astonished tone. "Oh, nothing of the kind, but we are careful not to let any salt touch the meat. If there were the smallest grain of salt on it the bees would not eat it."

"And is this the way you always feed your bees?"

"Always; and my father and my grandfather never gave their bees any other food than meat, because sugar was dear in their time."

The lady lifted up a hive, and on the floor was a black crowd of bees, in the midst of which could be seen the indistinct outline of the drumstick of a turkey. The bees were evidently hard at work, though I could not exactly determine what they were doing, but they were not carrying

anything out; and my friend only laughed at my suggestion that they might so dispose of the meat.

Bees certainly attack soft fruits. I have known them totally destroy two crops of ripe Peaches, and to cause much trouble in a vinery by joining in the depredations of the wasps.

Bees are very capricious in their tastes for flowers. I have a hedge of Globe Fuchsias crimsoned over with blossoms, which resounds all day long with such musical humming, that I put it down as a first-rate bee-pasture; but on close examination I did not find a garden bee on the whole hedge—the songsters were all of the wild furry family. This puzzles me much. Honey for one should be honey for all. I feel rather disappointed in my Fuchsia hedge, from which I had expected great things for my bees.—EUX.

BEE-KEEPING.

Bee-keeping. By "THE TIMES" BEE-MASTER. With Illustrations. London: Sampson Low & Co.

THIS is a superfluous and jesuitical book—superfluous because it contains nothing useful that is not to be found in recent cheaper works; and jesuitical, because whilst it professes to obviate "the obscurity and complexity of bee books in general," all its practical portions are pure and simple extracts from those very books. That our readers may judge for themselves on this point it will be sufficient to state, that the body of the volume contains 224 pages; of these nearly 50 pages are a reprint of the letters in the *Times*, and more than 70 pages are verbatim extracts from the works of Bevan, Taylor, and others. Not 30 pages are original.

We take leave to correct one of the many unfounded and reckless assertions in which the writer indulges. In page 142 he states that Mr. Woodbury has "patented" a hive, and insinuates over and over again that that gentleman exposed the Bee-master's errors because he did not notice this hive. It is more than probable that every apianian reader of this Journal knows this assertion to be untrue, and will disbelieve the ungenerous insinuation: nevertheless it may not be out of place to mention that to our certain knowledge Mr. Woodbury has no pecuniary interest in the sale of any of the hives which have been named after him, nor has he ever benefited, or sought to be benefited, a single penny by his apianian inventions.

With two further observations we leave the volume. We have no intention to criticise the *Times* for rejecting Mr. Woodbury's reply to the "Bee-master's" letter; but the "Bee-master," acting as judge in his own cause, says that reply was rejected "very properly." We must therefore observe, that at the Entomological Society, "Professor Westwood and the Rev. Hamlet Clark (two disinterested judges), regretted the diffusion of so much error in a leading journal, and the unfair treatment to which Mr. Woodbury had been subjected."

Lastly. The "Bee-master" recommends a lady, if she finds a toad in her apiary, to "empty on him a snuff-box full of strong snuff," adding, as if it was a jocular treatment, "he will reflect a few days before he returns to his old quarters." Now, we ask of our readers, whether ladies or gentlemen, not to adopt such a cruel treatment, for it insures torture and a lingering death to the toad.

BEEES, BEE-HIVES, AND BEE-MASTERS.

ON Tuesday the 11th inst., a lecture on the above subject, being the first of the winter course of lectures in connection with the Liverpool Young Men's Christian Association, was delivered at the hall of the College, Shaw Street, Liverpool, by the Rev. J. Cumming, D.D., of London.

The Rev. E. W. Forrest presided; and after calling upon the Rev. Mr. Forfar to open the proceedings by a prayer, briefly introduced the rev. lecturer, remarking that they must all be much surprised at the versatile talent of our lecturer, whether discoursing about the Pope, or descending upon the economy of the little insect which he will bring before our notice this evening.

The Rev. J. Cumming, who was enthusiastically received by the very large audience that thronged the hall, said they would no doubt be surprised at the subject announced for

their consideration this evening. He said, The truth is, I am accustomed to spend the summer months with my wife and children at a cottage in Kent, where for the last fifteen years I have sought out amusement, in hours that I could spare from those duties that devolve on me as a minister and teacher of Christ, in attentively studying the economy of the hive; and my lecture to-night will therefore be the result of my personal experience of the habits of bees. Some of you will perhaps say, "Dr. Cumming must have a bee in his bonnet, and but occupies his time for the moment with them." I have read few books on the subject; but I have twelve hives, some of which have glass windows and some have not, the bees in which know me so well that they would rest on my hands, face, and hair, and not one of them dare to sting me. I often sit for hours watching my bees, and when I observe anything interesting or unusual in their proceedings "make a note of it."

Virgil has given an account of bees in one of his Eclogues; but by far the most attentive watcher was the blind entomologist, Huber. I do not think that apiarians have succeeded in bringing any new facts to light, or noting anything concerning their habits which he (Huber) did not.

The component parts of a hive are three—workers, queen, and drones—not three different kinds of bees, but three different species.

Workers.—The worker is a little tiny insect, with four wings, and beautiful colour on its body. All the work of the hive is divided amongst the workers—some of them collect honey—and it is a curious fact that the bee never goes from flower to flower, but picks out a flower—thyme, borage, or clover—and keeps to it—some collect food for the young grubs, some act as guards to the hive, to keep out intruders; and there are others whose duty it is to ventilate the hive. I can play with my bees, and take a swarm in my hand; but if a stranger approaches the hive the guards instantly fly at him. But I think the most curious thing in the economy of the hive is its ventilation—four or five bees go to the mouth of the hive, and, using their wings as fans, by moving them backwards and forwards, keep up a cool current of fresh air through the hive. It is worthy of notice that, if a bee-master, in order to ventilate his hive, cut a hole in the top of it, the bees immediately cement it up with a wax-like substance which they collect, and which is called "propolis." From this we may learn that, while ventilation is necessary to healthy life, draughts are hurtful.

Queen.—The queen is twice the size of the common bee, and is the most elegant creature you could imagine—you would take her for an empress. Queen as she is, she springs from the ranks. The previous queen lays precisely the same egg in the royal as in the common cells, but the young princesses are fed with a peculiar kind of food called "royal jelly." If the queen dies, and there are no princesses, the hive falls into a state of anarchy, and one of three things will usually happen: either the bees will all take flight and perish, or pine away and die, or, more frequently, if there is a very young worker grub in the hive, they enlarge its cell and feed it with "royal jelly," and it in due time becomes a perfectly developed queen. I have seen the queen going round the hive giving instructions with twelve or thirteen ladies in waiting, who—this is a well-known fact—never turn their backs on her majesty, exactly like our own Queen's court. Bees are very fond of strong drink, particularly Scotch ale. Whiskey and brandy they will not touch, but give them rum with sugar in it and they will sip it up eagerly. The only time I ever saw bees turn their backs on their queen, was in a weak hive to which I had given some rum medicinally, and they all drank to excess, and, her majesty included, became intoxicated and tumbled about the hive. They eventually became so excited that, though November, they attempted to swarm, but as soon as they felt the cold wind outside they returned to their hive.

Drones.—In a good hive of about 20,000 bees, there are from 1500 to 2000 drones. There is no such thing as polygamy among bees. The queen selects one to be her husband, and he remains so until he dies, when she does not take another but remains a royal widow. You will ask, What then is the use of so many drones? I have made a discovery which has led me to adopt a theory, which has been opposed by many able apiarians. The temperature of the hive in the breeding

time (for I have thermometers in some of my hives), ranges from 90° to 95° Fahrenheit. The drones remain in the hive during the cool morning until twelve o'clock, when they go out and enjoy themselves for an hour, and then remain in during the evening. The only time when this high temperature can be kept up naturally is in the middle of the day, and during the months of June, July, and August, before which time the drones are killed. Drones, therefore, keep up the requisite temperature of the hive. They are lazy, idle, good-for-nothing fellows, and when the queen has selected her husband begin to sip the honey. When the workers perceive this they drive them out of the hive. Hundreds, I may say thousands, of times have I seen a little worker garotte and by sheer force throw out of the hive a great burly drone.

Hives.—In Kent, the peasantry use the common straw hive, and I have little doubt they do the same thing in Lancashire, suffocating the bees with sulphur when they want to obtain their stores. This is a most foolish proceeding, as besides destroying the stock, it utterly ruins the honey, by filling it with poisonous sulphurous acid vapours. It is very wicked, too, and I consider beeicide next to homicide. I use Stewarton hives, and from ten by the depriving system I this year obtained 212 lbs. weight of pure virgin honey, leaving the bees about 150 lbs. for their subsistence during the winter. I am not a honey-seller, but had I sold this to Messrs. Neighbour & Son, I could have obtained 2s. 6d. per lb. for the best, 2s. for part, and 1s. 6d. for the remainder. I make it a point never to kill a bee; but if I kill one accidentally, so good a memory have they, that for two or three days they would sting me did I go near the hive. If any of you have bees in a straw hive full of honey, my advice to you is, Do not suffocate the bees, but when most of them are out, about twelve o'clock, take a knife and firmly and fearlessly cut a hole in the top of the hive of about 3 inches in diameter. Have a board with a similar hole ready to put on the top of the hive, and on it place a bell-glass, put a nightcap over the glass to keep it warm, return in three or four days, and you will find the glass full of pure virgin honey. There is no prettier object on a breakfast-table than a bell-glass full of honey, and a very much better thing it is than fat bacon. Those who eat honey to breakfast always have sweet tempers. There are three kinds of hives in general use—the Ayrshire or Stewarton-hive; the collateral, but I do not think it so useful as the former; and the nadir, from nether, or lower. One great law is to make the hive as little tortuous as possible; my idea is, the plainer the more successful. Every cottager should keep bees, they will pay the rent, if he only have six, seven, or eight stocks, which will nett £8 to £10 per annum. If any of you are going to begin keeping bees, I would be happy to give any advice in my power.

Swarms.—If you do not give the bees room they will swarm; the swarm is always headed by the old queen; 10,000 or 15,000 bees rush out at once—some say they send out scouts to fix upon a place for alighting—and form a cluster with the queen in the centre, exactly like a bunch of grapes, 7 to 9 inches long, and 3 or 4 inches in diameter. Swarms always take place between twelve and three o'clock. A princess arriving at maturity either causes a swarm, or else the rival queens fight until one of them is killed.

Enemies of Bees.—**Wasps.**—Every one in the country must have observed the unusual quantity of wasps this year. They dash into a hive, and take a sip of the honey, until the bees collect together, and drive them out. I generally offer 3d. or 4d. for each wasp's nest destroyed in my neighbourhood. I know of no more useless insect. He lives by thieving. I often put a piece of barleysugar about 6 inches long at the entrance of the hive. The bees are so fond of this that they collect together in sufficient numbers to resist the wasps. **Spider.**—This is a great enemy of the bee. If a bee gets entangled in its web, nothing can save her. I have found it impossible to take its adhesive threads off her legs without mutilating her. The best remedy—a hard crush—and often used. **Tomtit.**—This little audacious bird will in winter fly on to the alighting-board, and knock at the door, and gobble up the first bee that comes out to see what is the matter. **Death's-head Moth.**—This is another troublesome enemy of the bee. The best remedy is to narrow the entrance so that it cannot get into the hive. **Snails.**—Snails

are so fond of warmth that they will crawl up the support of a hive, and sometimes get into it. The bees are powerless to sting them; but on one occasion I noticed a snail get into one of my hives, and after trying various expedients, the bees actually built it up all round with propolis until it was suffocated and then let it remain in its sarcophagus, as it caused no smell. But the bee's greatest enemy is man with sulphur.

Bees are very kind to their sick or wounded companions. They will take a wounded bee on to the alighting-board in the warm sun during the day, and lick it, take it in at night, and bring it out in the sun on the following morning. Bees are early risers, being at work by daylight, and they never work after four o'clock in the afternoon. They are very tidy and cleanly—you have no idea how often the hive-floor is swept out. None are lazy but the drones. They are very loyal, defending their queen from all attacks. They are not pugnacious; their stings are only used in self-defence, as they know that as their sting remains in whatever they attack, they are sure to die after it.

A vote of thanks to the reverend lecturer concluded the proceedings.—EATON CLIFF.

[For the correction of many of the mistakes made by the rev. lecturer, we refer our readers to Mr. Woodbury's two letters in pages 140 and 141 of our present volume, but we cannot refrain from noticing one or two additional blunders.

Surely Dr. Cumming must have been very unconscious of what has been passing in the apiarian world during the present century, when he hazarded the assertion that no new facts had been brought to light by apiarians since the days of Huber. Is parthenogenesis in the honey bee no new discovery? and can he possibly be ignorant of the numerous facts investigated and proved by means of the Ligurians—such as, for example, that bees do not always return to their own hive, nor are they invariably slaughtered when they attempt to enter a strange one; also that Huber was mistaken in dividing worker bees into two kinds—viz., nurses and wax-workers, the fact being that both are identical in every respect except age? Huber has also been proved wrong in other particulars, such as his statement that bees will invariably accept another queen at the expiration of twenty-four hours from the loss of their own, and that workers will at no time attempt to employ their stings against a stranger queen.

A queen bee is not nearly so graceful and elegant in form as a worker. Although she is ordinarily treated with great attention and apparent respect, no special "ladies-in-waiting" accompany her; nor does she ever give "instructions," for the duties of the hive are carried on with perfect regularity during the interregnums of the swarming season, and whilst her majesty is absent on her nuptial excursions.

If the lecturer had read even Huber with attention he would have learned that there is sometimes such a thing as polyandry (not polygamy) among bees; and if he were aware of what is passing around him he would have known that this fact had been confirmed by more recent observers.

When Dr. Cumming commences with "I have made a discovery," we may be pretty sure he is about to resuscitate some long-exploded fallacy, and this proves to be the case with his theory in respect of drones. We need hardly say that the queen never "selects" a husband, neither is a single worker anything like a match in point of strength for "a great burly drone," unless the latter has been much weakened by exposure to cold or starvation.

It is tolerably evident, also, that the lecturer has never seen a large, or even an ordinary-sized swarm, or he would have doubled his numbers, and trebled or quadrupled his measurements. It must indeed be but a poor swarm that on a hot summer's day forms a cluster only "7 to 9 inches long and 3 or 4 inches in diameter!"

What a lazy race of bees the doctor must possess if they "never work after four o'clock in the afternoon!" Truly they would appear to have joined the "nine-hours' movement," and we fear we may yet learn, on the lecturer's authority, that they have resorted to trades' unions and paid emissaries, in which case we may congratulate ourselves on being at such a distance from him that our bees are likely to escape contagion, and continue working as heretofore all summer through till darkness compels a cessation of their labours.

Seriously, we think it a great pity that Dr. Cumming should attempt either to lecture or to write upon a subject regarding which he knows so little. Compliments on his "versatility," and the "thanks" of town audiences who in this particular are necessarily ill-informed, may be gratifying to his vanity; but his evident want of information with regard to bees must make the judicious grieve. Occupying as he does no mean position in the very highest and holiest of professions, he might surely leave apiarian science (to which, as he most truly says, he has contributed nothing whatever), to be taught by those who really understand it.]

COOKS, COOKERY, AND WILTSHIRE BACON.

MAN is a carnivorous animal, also an herbivorous, also a frugivorous, also—for I might possibly add another "also"—what does man not eat? The earth, the sea, the mountain, the plain, are alike ransacked by him for food; but flesh is not good when raw, nor vegetables nice when not cooked, and fruit, although pleasant enough to the palate as plucked from the tree, is improved after having been submitted to the action of fire. Witness an apple-dumpling—a dish fit for a king. Why, did not its very manufacture cause wonder to arise in the breast of George III.?[†] in honour of which event it ought to have been called "King's dumpling." As James I., at the banquet at Houghton Tower, near Preston, is said to have knighted then and there a loin of beef, so "farmer George" should have taken the wonderful dumpling under kingly patronage for ever.

Now, it seems, possibly by accident, that man in very early days cooked his food; he became, or found, a cooking animal. How does this matter stand now that the world is in round numbers some six thousand years old? We will in our investigation of this subject go no further than our own country. Well, in every cottage cooking is going on at some time of each day, usually in the evening, for although the labourer and mechanic may do with bread and cheese, or a slice of cold bacon and bread, at their brief meals in the day, yet they naturally, when they come to sit down and feed in earnest, like a hot supper. Cold food may do in the daytime, but hot bacon and potatoes or greens and hot pudding at night. Then, again, cooking is going on in the mansion all day long; cooking for hot breakfasts, for lunch, for dinner, besides preparing all sorts of things to come in at future times. In houses of the middle class cooking occupies even necessarily a great deal of thought and time. Now, who, as a rule, is cook? Well, we reply, women, though with a full recollection of male cooks rushing across our old college court at Cambridge, white-aproned and white-capped. Yes, as a rule, woman is the cooking animal. Among the countless thousands of benefits and comforts coming to us from woman's presence in the world stands this—she cooks for us. And now for a little homily upon this subject of cooking.

I am sure it occupies too much thought and time, infinitely more than it did when our fathers were in our places. We are grown very heathens, and the first question practically asked in our houses is too often, "What shall we eat and what shall we drink?" with this commentary, let the most luxurious viands be prepared in the most luxurious way. If asked to give an example in proof of the extravagance of the age, I would point to the increase in cooks' wages. A good old body, cook in old days in a mansion well known to me, had but £14 a-year, and managed to save a fortune out of it. One of her successors had £40 per annum. Cooks now can get any wages, they are the only servants who can rapidly make money. As to governesses, why the cooks would not change places with those poor young ladies—of course not.

Then, look at the alteration in respect to the dinners. They used to be plain and good, roast and boiled, with a side dish or two. Now, in the same house are side dishes by the dozen. Hence it comes to pass—how intolerably long dinners last!—you sit down at half-past seven, and finish possibly at half-past nine, then dessert; and so the whole evening is consumed in gourmandising. People give dinner against dinner, side dish against side dish, vying as to excess and richness of food; they talk of having had "such a feed at Mr. Plutocrat's." What animals! their horses would use the same words if they could but talk.

Now, from these lengthy dinners it follows there can be no intellectual games, such as Canning loved; little or no time for music or anything rational. I once heard of three maiden ladies whose evening entertainments were termed "bohea, prayers, and turn out." I would say that some modern dinners are, "cram, guzzle, and turn out." People meet not so much for pleasant intercourse as for gluttony. The world began to go wrong when dinners were later than six o'clock. England has been on the decline ever since.

The demand for cooks is something tremendous. Letters from friends continually have this—"P.S. Can you send me a good cook?" The moment one meets a friend, after hurried, very hurried, inquiries after one's health and family, out comes the all-important subject, that of a cook. I had an amusing instance of this cook-demand a little time since. I was at a railway station when a clerical acquaintance caught sight of me, his looks, his gestures, his rapid run across the line bespoke, so I deemed, his great regard for me. I thought, "Ah! the world is not heartless after all, here is a man I hardly know, so pleased to see me. Here he comes rushing forward to shake hands." Judge of my disappointment when, breathless and panting as he was, out came the old question. "Can you tell me of a good cook? Mrs. A. is distracted for want of one." Now-a-days it is not, "Oh, for a poet;" but "Oh, for a cook."

The son of a gentleman married his father's cook. Why did he do so, what could be his reason? She was not beautiful, she was not rich, though her pie-crust might be. At last a sensible matron, not unfrequently the troubled mistress of a cookless kitchen, suggested—"I think he did it to secure a cook; I can't secure one. The man was right, now he will be sure to keep his cook."

In olden times young ladies had a carving master as well as a music master, it was not a bad idea. Why should not our young ladies take lessons in cooking? Rely upon it, the best mistress is the one who knows how work is done. I would say, a lady who became a proficient in the art should have a medal or a certificate, and it should be shown to the gentlemen after dinner. I think it would be a kind of marriage qualification. Besides, if all the cooks in England should strike, as the London cabmen once did, and cooks have become very independent, then with lady cooks as a resource we should not starve.

Now, although I thus rightly, for so I think, rail against extravagant cooking, or too much cooking, yet as long as the world lasts there must be cooking, and cleanly wholesome cooking is ever to be praised, and he that helps me to eat health-giving food does me a favour. I would say then, every one ought to eat a good breakfast. If he does not he cannot do a good morning's work, and the morning is the best part of the day. Further, many have a poor appetite for the morning's meal and just nibble a bit of toast and drink off a cup of tea. This is not the breakfast to work upon, it only ends in faintness at ten o'clock, hunger at half-past ten, and a splitting headache the rest of the morning, besides, perhaps, a tendency to irritability the whole day. Now, the working man in order to work well with hand or pen in hand must make a good breakfast. If he has naturally a bad appetite it must be tempted, and nothing for this purpose is equal to bacon, more particularly and especially Wiltshire bacon.

Just in passing let me say that potted beef is, I find, a good tempter to a sickly appetite, and let me just drop a hint about its manufacture. It is often too dry and hard, rather resembling semi-conjoined pellets of tow out of a boy's popgun. Now, to remedy this, next time have beaten up with the beef a bit or two of boiled bacon, then you will have an improvement in flavour, and its consistency will be that of a nice smooth spreading paste to cover your toast with.

As to bacon I cure my own. I manage in this way. I buy a little pig in May; he is destined to die, weighing eight score, in October or November, according to the weather. This I call my summer pig. In August I buy a second, for I have two sties. Thus I have two pigs at the time of the year when there is an abundance of green stuff in the garden of no use but to throw over to the pigs. Hoofs and stomach do their work in producing plenty of manure for my garden. By the time the first pig is killed the second has become a strong fellow. N.B.—It is of no use to have a very little

pig during the winter, he cannot stand the cold, but by having him a good size before the winter he goes on bravely.

Well, I kill this pig in March, never if possible exceeding the eight score. If more, pigs are too fat and there is waste; if smaller, the bacon is too thin. Thus I go on year after year. I would say, that the country parson who does not keep a pig or two has a lesson to learn in economy. If I gain nothing—but I do gain—still the garden gains. Besides the flavour of pork depends upon the food on which the pig has been fed: hence, a wholesomely-fed pig is doubly valuable, into whose mouth has passed nothing but good vegetables, bran, meal, and sharps.

As to the curing, I manage that in a tray made of beech wood $\frac{1}{4}$ feet long by 2 feet wide, and half a foot deep. One particular precaution is, to have a hole made in one corner to let the brine run off, in that lies the secret of good bacon. At the end of six weeks take out your flitches, rub them with bran, and putting them in bags, hang them in your kitchen. Then begin on them, let rashers be cut very thin and be only just done, once made a dry frizzle and all is ruined—flavour, wholesomeness, relish, all gone.

I have said nothing of the grand killing day—the charms of pig's fry, griskin, spare-rib, chine, even hams must go unsung. Pigs have one great vocation in life, at least in death—viz., to make bacon, and those who like not rook-pie, yet like well rashers of bacon. How they grace the breakfast-table! How pleasant to say, "My own feeding I assure you, no fear, do take a piece;" and to get after a few minutes the words, "How very nice, what a breakfast I am eating!" As to myself, I rise with no fear of getting faint, nor of being irritable. I do a good morning's work, perhaps I even write a paper for "Our Journal." One last word upon the sort of pigs. I prefer the black Berkshire breed chiefly. I had once two at the same time, one black the other white, we called them "Gown and Surplice," but "Gown" fairly beat "Surplice," and so black became the established colour at Hilltop Rectory. My dog is black, my Bantams are black, and my pigs are black, the colour is consistent throughout.—WILTSHIRE RACTOR.

OUR LETTER BOX.

WEIGHT OF BUFF COCHIN COCK (C. S.).—As it weighs 8½ lbs. at twenty-two weeks, and, if it goes on at the same rate, it will weigh in December nearly 11 lbs. Quite large enough for exhibition.

POINTS IN NANKIN BANTAMS (A Poultry Fancier).—The hens should be buff coloured all over, save the tail feathers, and a darker shade on the hackle. The cocks should be red all over, except the tail; they should have blue legs, and be very small.

COLOUR OF BLACK-BREASTED GAME BANTAM'S LEGS (R. J. W.).—Any colour is admissible for the Bantam's legs. Willow are the most esteemed. The cocks should be dubbed as late as possible, but before they change feathers. If dubbed too early the comb grows, and a second operation is necessary. Say from five to six months. They cannot weigh too little.

BOOK ON FOWLS (Cornwall).—"The Poultry Book," by Wingfield and Johnson. It is out of print, but copies may be found occasionally at the dealers in second-hand books. It has superior coloured portraits of prize birds.

BRAHMA POOTRAS (Idem).—We are perfectly convinced that they are only a variety of the Shanghai, or a cross between that and the Malay.

BEES ROBBED BY BEES (S. M. C.).—The best mode of preventing further mischief is to elude the attacks by temporarily removing your bees to a distance of not less than a mile, or a mile and a half. In a few weeks' time they may be safely returned to their old positions. Narrowing the entrances, so as to admit of the passage of only a single bee, will enable the besieged colonies to offer a more stubborn resistance; but a short term of transportation is the most effectual remedy.

EARWIGS IN HIVES (A Lover of Bees).—Earwigs in hives are of course a nuisance, but we have often found them stray into really strong colonies, and never could perceive that they did any serious mischief. Messrs. Neighbour & Son, 149 Regent Street, and 127 Holborn, manufacture Payne's and every other description of bee-hive, and will state prices and furnish catalogues on application.

BEES FROM A DISTANCE (T. S., Surrey).—If the bees come safe to hand they had better be permitted to remain in their original hive until spring, and then be allowed to swarm naturally. In the event of a smash, which is far from improbable, the box and combs may yet have to be resorted to, but in this you must be guided by circumstances. A transfer so late in the year would at the best be very hazardous. With regard to the necessary supply of pollen much must depend on the character of the remaining months of autumn and the approaching winter.

TOMATO SAUCE (G. J. N.).—Stew six tomatoes in an oven till quite soft take out the pulp with a teaspoon, and add cayenne and vinegar till of the consistence of thick cream. Italian.—Take five or six onions, slice and put them into a saucepan, with a little thyme, bay leaf, twelve or fifteen tomatoes, a bit of butter, salt, half a dozen berries of allspice, a little Indian saffron, and a glass of stock: set the whole on the fire, taking care to stir it frequently, as it is apt to stick. When you perceive the sauce is tolerably thick strain it like a *purée*.

WEEKLY CALENDAR.

Day of Month	Day of Week	OCTOBER 25-31, 1864.	Average Temperature near London.			Rain in last 37 years.	Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock after Sun.	Day of Year.
			Day.	Night.	Mean.	Days.	m. h.	m. h.	m. h.	m. h.		m. s.	
25	Tu	Golden Plover appears.	55.9	38.9	47.4	15	44 6	45 4	15 1	32 2	25	15 53	299
26	W	Short-eared Owl appears.	53.4	36.7	46.0	15	46 6	43 4	18 2	58 3	26	15 59	300
27	Th	Whitethorn leaves fall.	54.8	39.1	46.9	23	47 6	41 4	22 3	14 3	27	16 4	301
28	F	St. Simon and St. Jude.	54.5	38.7	46.6	21	49 6	39 4	27 4	36 3	28	16 9	302
29	S	Wild Duck arrives.	53.5	34.8	44.2	17	51 6	37 4	31 5	0 4	29	16 12	303
30	Sat	23 SUNDAY AFTER TRINITY.	53.1	38.4	45.7	18	53 6	35 4	36 8	28 4	30	16 15	304
31	M	Woodcock arrives.	52.9	38.3	46.1	20	54 6	33 4	43 7	1 5	31	16 17	305

From observations taken near London during the last thirty-seven years, the average day temperature of the week is 51.7°, and its night temperature 37.5°. The greatest heat was 67° on the 26th and 30th, 1863; 51st, 1834; and 28th, 1860; and the lowest cold, 23°, on the 29th, 1843; and 26th, 1859. The greatest fall of rain was 1.66 inch.

WHITE ROSES.



HAVE read with interest the article of "D." at page 290. I agree with him that we want new pure white Roses. The best I know of are Madame Zoutman (summer Rose), full-sized, nearly white; a strong grower, and a great and good bloomer. It is the best of all the light summer Roses, just as Paul Ricaut is the best of the coloured summer Roses. The best Roses of white tendency with good attributes are H.P. Madame Freeman, pure white and of excellent shape, and a good grower here; Bourbon Acidalie, and the two Tea Roses Devonensis and Sombreuil. The last is here a very healthy hardy plant on the Manetti stock. I never protect either of them more than I do Hybrid Perpetuals. The above five are the best, taking all points, and are suited to most soils. Madame Alfred de Rougemont, an excellent grower and a great bloomer, and Emotion, lovely, are both too small. Virginal requires a wall and very good soil. Louise Darzins and Louise Damaizin I do not possess. Louise Margottin as exhibited in London appeared to be of a novel and lovely colour, not white but tender flesh, and not of sufficient substance in the petals—a matter too much overlooked.

We want Roses of pure white like Princess Clementine (a flower which soon falls), and of the substance of Acidalie and Madame Zoutman. Madame Freeman is the best I have seen lately. Mademoiselle Bonnaire is lovely, but it is not white nor a very good grower; it is white with a delicate rosy centre. Sœur des Anges is often craxy, but it is a full-sized Rose, rosy flesh in the centre, and occasionally magnificent. I have twelve plants of it together. It is a good grower. To prevent crackiness, perhaps it would be well to take up the plants every year and root-prune. By thinning the buds I obtained some magnificent specimens. If this does not succeed, probably destroying all the first buds would cause the plants to send up single buds, which, with abundant watering in sultry weather, would produce more perfect and free-blooming buds. I shall remove my plants in the spring and practise my suggestions.

As regards Madame Vidot and Madame Rivers, it is to be regretted that they are somewhat delicate and uncertain. The former, as a flower approaching white, has not yet been beaten. The finest Roses of light colour here are Souvenir de la Malmaison and Duchesse d'Orleans. They are both magnificent here, and good and abundant bloomers. The former is on its own roots and on the Manetti stock, against a south wall; the latter is on the Manetti only, and in the open. Taken at all points, for two seasons Duchesse d'Orleans

has beaten Sœur des Anges; still I have occasionally grown a bloom of the daughter that has eclipsed the beautiful mother. They are both more suited for autumnal blooming than to the early part of the year. That is the case with the following Roses in other colours—namely, Anguste Mie, Souvenir de la Reine de l'Angleterre and General Washington—all grand Roses. Such Roses are very useful after others have done their work.

I shall be very much obliged to "D." if he will give us further information. Can he tell us anything of Madame Macker? I see that the Roses of 1864, which I selected by prophecy, have turned out to be the best—viz., M. Victor Verdier, La Duchesse de Morny, Eugène Verdier, and Pierre Notting. The last I did not name, as nothing was said of its form. Alpaide de Rotalier is well spoken of. Of this and the first two I have nineteen nice plants. The best new Rose I have seen lately is Lord Macaulay. The best seedling, likely to be a very good Rose, is in my opinion Dr. Lindley. It is of great size, excellent substance, and very dark.

I saw at Mr. Keynes's lately an admirable bloom of Paul Desgrand, brilliant crimson, and globular. Laurent Descourt as an ornamental Rose will be a great favourite. I began with white and have ended with purple.

Kushton.

W. F. RADCLIFFE.

P.S.—The blooms of new Roses sent to me for inspection were Lord Herbert and Lord Macaulay. The best that I saw in London were Lord Clyde and Monte Christo, a delicate grower. The best of all was Charles Lefebvre.

HARDY FERNS:

HOW I COLLECTED AND CULTIVATED THEM.—No. 2.

RETURNING to one of the midland counties with my book of dried impostors, I showed it one day to the late Mr. Bree (after whom the *Lastrea Fenisecii* is called "Bree's Fern"), bewailing to him the difficulty I had in naming truly the specimens I found, with no other help than that given by books.

Mr. Bree did not say, as he might have done, "It's your own ignorance," but in his own kind way he gave me a bit of advice that has helped me more in my searches than anything I have read in books. He said, "Yes, it is always a difficulty to beginners; but the best way is to make yourself thoroughly acquainted with the looks of the true Fern before you hunt for it, and in difficult varieties to try and get a frond, so that you may match it;" and, in order to help me further, Mr. Bree sent me a number of fronds, such as *Lastrea Fenisecii*, *L. cristata*, *L. rigida* (found by Mr. Bree at Ingleborough, in Yorkshire), *Polypodium phegopteris*, *P. calcareum*, &c., to take about with me till I had either found their fellows or learned the true notes of their speciality. Of *Polystichum lonchitis* there was only one true plant in my immediate neighbourhood, and this had but three fronds, so I had to make it a morning call and learn its features as best I could.

Furnished with my book of "patterns," a black tourist's bag, two trowels, one flat like a bricklayer's, to pick Ferns out of rock or wall, I set off on a Scotch tour. I was provided with all the requisite means of collecting the Ferns; but how was I to carry them about for two or three months in any quantities? I hit upon the following plan which answers so completely, that I think I may say I have hardly lost one specimen since I adopted it, and I have brought Ferns from the very heart of the Pyrenees.

I provided myself with a large tin box with padlock and key, and three or four yards of common brown calico. As I found the Ferns I wrapped them up in bits of calico with a little earth and drainage at the bottom, sewing them tight, like little mummies, leaving only the fronds and stalks uncovered. In this way the tin box held large quantities. At the inns I simply unlocked the box, and once in every few days sprinkled them with water. I have carried them in this way for two or three months. They are not half the trouble of a new bonnet, for they come out at the end of the journey as fresh as when they started, which I grieve to say a bonnet never does.

Our first halting place was Edinburgh, and early morning found me wending my way through old dingy streets, past houses of a dozen stories high, to Arthur's seat, where in some retired nook I was told I might find *Asplenium septentrionale*. Ever and anon, as I walked, I turned to gaze. Below me lay the fair Palace of Holyrood with its ruined graceful chapel and its thousand associations. There Rizzio was murdered. There the beautiful but hapless Queen Mary sinned and repented. There the Pretender slept—Pretender indeed! Instinctively I hummed the old Jacobite toast, ending—

"But which Pretender is, and which the King,
Why, bless us all, that's quite another thing!"

Away to the left in the old town is the Tolbooth, and a little further the Canongate, places that seem to come to you as scenes of your childhood, so familiar have the wondrous pages of Sir Walter Scott made them, and as one toils up the steep ascent to Arthur's seat a crowd of old memories rush in upon the mind, and the eyes become a little blind to the direct object of the walk. What wonder, then, if you return, as I did, Fernless, but with an appetite as keen as a hunter's from the pure air sweeping to you over the white-capped waters of the Frith of Forth?

My first personal acquaintance with *Dryopteris* (I must be allowed to use their christian names!), in its wild state, was made between Hawthornden and Roalin, in a lovely walk raised a little above the flowing rippling Esk. In the woods on either side it grows in great luxuriance, and many a root found its way into the black bag. It gave rise to a great argument, one of the party declared it to be *Calcareum*. In vain I said *Calcareum* had not as yet been found in Scotland; in vain I pointed out the true characters of *Dryopteris*, the pale green of the young fronds with their three little rolled-up balls, the flat compact forms of the larger fronds, descending meanwhile on the blue green of *Calcareum* with its larger more straggling fronds, its narrower pinnae, its sharper serrated pinnules. It would not do, and, doubtless, to this day the same Fern bears two distinct names in our respective ferneries.

Dryopteris is a little difficult to pack from its creeping roots; but I was unmerciful, cramming a whole heap of delicate little fronds and roots into one mummy case, and of all my transplanted Ferns *Dryopteris* stands second in its free growth and increasing habit; but it should be planted as a border to a fernery amongst the lowest stones, and never in the upper stages as it soon overgrows any Fern near it. It looks well in contrast with *Asplenium trichomanes*. I found *Dryopteris* very plentiful all over Scotland; but in Fern-hunting I make a rule always to take the first specimens I find. It is easy to change them for finer plants afterwards, but Ferns are usually very local, and an opportunity neglected is oftentimes an opportunity gone for ever.

My next acquaintance with *Dryopteris* took place at Callander, where a tourist is first allowed the privilege of saying he is in the highlands. Callander is a famous place for a few days' halt, for there are good fish in the river, and the country around abounds in wild flowers and Ferns. It is a pleasant little village of scattered white houses, backed by Fir-clothed rocks, while in the front and to the right are

undulating hills leading up to the foot of Ben-ledi, or the "Mountain of God," where shadows are always dwelling. I was told I should find *P. lonchitis* on Ben-ledi, but I searched there in vain.

Within a walk of Callander are the Falls of Brachlinn, to which we were guided by a shoeless intelligent child of the mountains, carrying our basket of provisions, which we ate on some scattered rocks within sight and sound of the merry leaping waters, which fell at our feet with a rushing mighty music. It was just the home for *Hymenophyllum tunbridgense*, and little Maggie and I jumped from boulder to boulder in fruitless search; but roving amongst the debris of leaves and moss I found a whole carpet of *Polypodium phegopteris* and *dryopteris*.

I have noticed this peculiarity in *Phegopteris*—it chooses shade for its roots, but the fronds make their way through tangle and briar up to the light and sunshine; and to do this the wiry stalk is often half a yard in length, so that sometimes it is no easy matter to get at the roots, and I chose rather the plants where the fronds were less fine and the stipes shorter. These, usually, were near at hand on drier soil.

Phegopteris is not so happy-looking in cultivation as *Dryopteris*, and it is even more troublesome to pack. I took up a large surface of roots, sewed them in a flat package and put them at the bottom of the box with the other Ferns upon them. In this way the fronds were injured, but the roots themselves were unharmed. About Callander I found my first *Cystopteris fragilis*—that loveliest of all our English Ferns—so easy of cultivation, so delicately varied in form, and yet so tenacious of life that the smallest division of the bulbous-looking roots will grow. I do not think sufficient attention has yet been given to this Fern.

I have in my collection many true and constant varieties, for which I can find no name in books, one of these and the most beautiful in its diminutive grace is hardly 3 inches in length. The pinnae are nearly opposite each other, and are in the lower pinnules thrice-pinnate, the whole of the divisions are acute, and this separates it from *C. alpina*, as also from *dentata*. I have other varieties equally distinct, and coming up year after year true to their original form; but I did not find these at Callander, though all the old broken walls abounded in the usual form of *C. fragilis*, and I brought away dozens of plants in their compact mummy cases.

My first Scotch "Sabbath" was passed within the shadow of Ben-ledi. How different it was from an English Sunday, and still more from an Italian *jour de fête*. A deep solemnity seemed fallen on the world, the very mountains looked a shade more green, and the wild flowers as if they blushed at looking so pretty, and growing on this sober day. I went to the "established church," from which the "Free Kirk" has fallen away, just as the "Southerners" fall from the "North," which in like manner fell from its allegiance to England. The humble building was filled with a sober severe-looking congregation. The minister and Kirk session were in the vestry electing three "elders," of which notice was given to the congregation, and if any had objections to raise they were cited to appear and state them. Presently the minister came and gave out a psalm, which we all sang sitting down, then he made a little quiet prayer, all the congregation standing, then we sang again, after which there was a sermon with nothing particular in it, then another psalm, then the elders were addressed and vowed obedience to the "confession of faith." After this the congregation were addressed relative to their duties to the elders. A very onerous post these elders seemed to fill! Verily, if they did their duty and interfered with their sinful brethren as they were bidden to interfere, methinks the old-established Church of Scotland would deal in anathemas as freely as the Church of Rome.

Sober and stern the congregation looked, sitting descendants of the rude old Covenanters, who counted their lives as nothing compared with the faith they loved. I joined in the singing with a "good courage," remembering how the forefathers of these people had bought their freedom of worship with their blood; yet it was refreshing to be once more in the bright free air with the birds singing joyously overhead, and the glad sunshine glinting amidst the trees and making the flowing river like a pathway of silver adorn the happy fields.—FELIX-FEMINA.

VINES PLANTED, INSIDE AND OUTSIDE A VINERY.

I HAVE Vines (six in number), planted outside my cold vinery. Inside is a very good border about 2 feet deep. I have been thinking I could plant a few Vines here to fill up the vacancies between the present Vines. The borders are on lime rock and well drained. Do you think the difference of temperature in the borders would prevent their being grown together?—A YOUNG BEGINNER.

[Not at all. The Vines will not interfere with each other, though those planted inside may come a little earlier. You might plant so as to have all the Vines ultimately inside, with means for the roots to go out, and then if disposed you might cut out the outside ones as those inside filled the house; but planted in both positions the Vines will do well enough.]

BULBS FOR FLOWER GARDEN DECORATION. (Continued from page 287.)

RANUNCULUS.

THESE are deserving of more extended cultivation. Being symmetrical in form, brilliant in colour, offering almost every hue found in flowers, and the petals converging to the exquisite moulding of the florist's hemispherical outline, the Ranunculus is unequalled by any of our much-vaunted bedding plants, and worthy of every care. If we wanted a proof that Ranunculuses are something more than common, it is the attention demanded for their cultivation—not that they are difficult to grow, but they require something more than ordinary care.

The essentials to success are—first, a free, rich, deep soil; second, an open situation, but sheltered from cold cutting winds; third, though delighting in a moist soil, the Ranunculus is very impatient of those which are cold and undrained; fourth, not to bury the roots too deeply in the soil, 1 to 1½ inch being sufficient in heavy ground, and 2 inches in light soils; fifth, copious supplies of water when the foliage is advancing and the bloom-buds or flower-knots forming, also when in flower; sixth, slight protection from frost.

The ground in which Ranunculuses are to be planted should be dug deeply, 2 feet is not too deep, and at least 3 inches thick of well-rotted manure should be worked into the soil. If the ground is of a light nature cow or sheep dung, because cool, is to be preferred. If the soil where the bed is to be formed is not sufficiently deep, the substratum must be taken out to the above depth, and some good, sound, turfy loam put in its place, working the manure in along with the loam to a depth of 20 inches, and on this is laid 4 inches deep of soil in which the bulbs or roots are to be placed.

If the soil is of a very unsuitable character, the beds may be taken out to the depth of 2 feet, and filled up with a compost of hazelly turfy loam, formed of rotted turves a year old, mixed with one-third of well-decayed manure. The materials employed should be well exposed to the action of frost and air for some time, especially if the soil is heavy. In that case the bed will be prepared in autumn, and left rough, so that frost and exposure may do the work of pulverisation.

In soils of a not very wet nature it is preferable to plant in the autumn, though February and March are the usual periods. Autumn planting, however, is preferable on light soils, and not the less on account of the blooming being earlier, and I therefore plant in the beginning of November. On heavy, very damp soils, however, I have occasionally planted in February, but quite as much because the soil was not in a fit state for planting in autumn, as through any fears entertained as to the plants not doing well over winter. In fact, I find more deaths from spring than from autumn planting. The secret in growing Ranunculuses is to plant them at such a time that their fibres may penetrate to a sufficient depth to be proof against the drought of spring, if not there will be a failure in the bloom, many not showing a single flower, or if they do they will not come to perfection, the blooms being small, ill-formed, and of short duration. If only the ground be drained effectually, I have no hesitation in saying that they will bloom earlier, quite

as well, and often better, if planted from November 1st to December 15th, as when planted in February or March.

I would recommend planting the Turban Ranunculuses in November, and the Persian, too, if the soil be free of stagnant water, and not later than the first week in December, in drills 6 inches apart, and 2½ inches deep, placing the tubers with their claws downwards, firmly pressing them into the ground, and then covering with 2 inches of soil, but if the latter is wet an inch of sand should be put on first, and then the proper thickness of soil. A little before, or by Christmas, cover the bed with an inch of leaf mould about half decomposed, and during frost carefully look after the beds, pressing in gently with the fingers any roots that may be thrown up to the surface. Some cover the beds with a layer of protecting materials, as tan, litter, &c.; I have never found it necessary, and if put on at all, it should be removed before the foliage appears, otherwise it will in all probability prove their ruin. On the other hand, the inch of partly decomposed leaves is almost reduced to nothing by spring, and after acting in winter as a protection will serve in spring to retain moisture, and prevent the surface cracking.

In April and May, the Ranunculus owing to forming its roots near the surface is unable to withstand dryness of the soil: hence it is necessary to water twice a-week, or more or less frequently according to circumstances, a good bloom being dependant on maintaining a uniform degree of moisture in the soil in dry periods. After the flower-buds appear, and whilst in bloom, water between the rows every other day; but when the flowers fade discontinue watering; after the foliage turns yellow take up, dry, and store in a cool, dry place. In watering give a thorough soaking, surface waterings being worse than useless, for by keeping the surface moist under a broiling sun evaporation is excessive, and the temperature lessened, which cannot fail to weaken the plants. It is the fibres that want the moisture, and to reach these it must be given copiously. Dribblings are of no use. Cold, dry air is very injurious to the Ranunculus.

Of Turban Ranunculus, the best for grouping are—Romano, scarlet; Turban d'Or, scarlet and gold; Seraphique, yellow; Hercules, white; Souci Doré, spotted; Grandiflora, crimson; Merveilleuse, yellow; and Turban Noir, maroon.

Of Persian, choose Bella Donna, white, spotted purple; Mont Blanc, white; Nosegay, yellow, brown-spotted, and sweet-scented; Eil Noir, black; Prince de Galitzin, yellow, brown-spotted; Fireball, bright red; and Commodore Napier, yellow, brown-edged.

ANEMONES.

Elegant in foliage, and brilliant in the varied hues of their flowers, these are adapted for producing splendid groups or masses in the flower garden. They delight in an open soil and situation, but will thrive in all soils free of stagnant water. The tubers intended to furnish an early bloom should be planted in October, the ground being previously dug, and a liberal dressing of leaf mould or thoroughly decomposed manure worked in. Plant if possible during dry weather, about 2 inches deep, and from 6 to 9 inches apart, gently pressing them, for the roots are fragile; and use a little care in placing the right end uppermost.

In January go over the beds, and after stopping up with dry soil all holes made by the foliage pushing through, or worms, place a couple of inches of half-decayed leaves over the beds, between the foliage, which will act as a protection to the crowns and also to the young foliage springing therefrom.

There is a difference as to the time of planting. Some prefer January to October, but I have found October the best time for planting to exhibit them in bloom in spring, so that they may make way for bedding plants at a later period; whereas, if they are planted in January or February the blooming is not past until far on in July, and it is then late for planting bedding plants. I therefore advise their being planted in October or at latest by the beginning of December. I do not say I would adopt this treatment with a choice collection; but, nevertheless, I think that Anemones do not like too long a period of rest, but rather the contrary, it being better to take up rather early to prevent that tendency to commence growth immediately after maturity. Nature is in favour of planting the Anemone in October, as that is the time when her influences are at work on the

Anemone root. I have had splendid beds without taking up the roots at all, by simply removing the decayed foliage and giving an annual dressing of partially decayed leaves in December. This treatment, however, will not do for beds, it being necessary to remove the tubers; and that should be done when the foliage turns yellow, drying and storing them away in a cool dry place until October, when they are to be planted.

Of double Anemones, the best for grouping are Lord Nelson, violet blue; Harold, purple blue; Prince Albert, deep violet; Preciosa, red; Richelieu, scarlet; Superbe (Scarlet Superb), scarlet; L'Eclair, scarlet, the best scarlet; Rose Mignonne, deep rose; Victoria Regina, velvety red; Hortensis, red; Josephine, scarlet; and L'Ornement de la Nature, blue.

Of single, the best is the Scarlet sometimes called Brilliant, and brilliant it is; in addition to which there are mixed colours which no one dare name for fear of being laughed at, and yet they make a great show in spring and early summer.

The blue Wood Anemone (*Anemone apennina*), is like the Wood Anemone, but the flowers are larger—about the size of a crown-piece, of a brilliant sky blue, and the foliage is even more handsome than that of the commoner species. Being a sheet of bloom in April, no plant will command more general admiration, and it will grow anywhere—either in the parterre, park, or grove, but calcareous soil is best. It should be planted at latest by the middle of October. A fitting companion for it is *Anemone hortensis*, or Star Anemone, from the mountains of Southern Europe, and perfectly hardy. The flowers are $\frac{1}{4}$ inch across, of a ruby-scarlet or purple, and produced in April and May. Seedling plants of these very much in colour, especially those of *A. apennina*, they being purple in different shades, and white.

A. pulsatilla, so fine in chalky pastures, with its violet flowers, must find its way into every garden; and so ought the yellowish Portuguese species, *A. palmata*. *A. fulgens*, a shining variety of the Peacock's-eye (*A. pavonina*), with the species and the double variety of the Wood Anemone (*A. nemorosa*), also the Garland, both single and double, (*A. coronaria*), from the Levant, must have a place provided for them in some shrubbery-border, which will be all the more frequently visited if gay with a few flowers.

IRIS.

Beautiful in its way, but not so much in beds. The English and Spanish grow well in the open ground in any light rich soil, flowering in June. They should be planted in the end of September or beginning of October in patches of six or more, and about 8 inches deep. The Spanish Iris blooms the earliest, followed closely by the English, which are larger.

IXIA, SPARAXIS, TRITONIA, AND BABIANA.

These are somewhat tender, the difference between hardy and not being due to the depth the roots are planted at. The best situation is a greenhouse border or south border, and the soil should be of a light sandy nature. If it is composed of sandy loam, leaf mould, and sandy peat in equal parts it could not be better. They should be planted from 4 to 6 inches deep, and must be protected by a covering of dry leaves when severe weather sets in, placing a little soil thereon to prevent the leaves being blown about by the wind, and removing it in spring. Grown in this way they bloom much better than in pots, and continue to bloom from May to August. The proper time of planting is October. They should not be moved except for the purpose of increase, as dryness of the root otherwise than in dry soil is more injurious than beneficial.

ALSTROMERIA.

Once grown in hothouses, but now found quite hardy when planted at a suitable depth. *A. chilensis* is suitable for grouping, attaining a height of from 2 to 3 feet, producing numerous racemes of elegantly shaded orange red, yellow, or rose flowers, diversified by lines on a lighter ground. *A. aurea*, orange red; *A. haemantha*, bright flamed red; and *A. psittacina*, red and green, form excellent groups in borders; whilst the smaller kinds, as *A. tricolor* and *A. pelegrina*, are rather more tender, yet form interesting groups when planted in sheltered borders, and do not attain a

height of more than 18 inches. The *Alstromerias* retain their beauty as cut flowers in water longer than many plants, and I forget now whether they or the *Gladiolus* retained it the longer. They like a free rich soil, but will thrive in any good ground, only the subsoil must be well drained. They should be planted from 6 to 9 inches deep, with the bud-like crown uppermost. Once planted they are no further trouble, and it is not uncommon for them to seed and increase at a rapid rate. *A. acutifolia* is a climbing plant, a frame perennial as hardy as any of the others; and *A. argentea vittata* has beautiful variegated foliage, the best in the lot being a hybrid, *A. Ekrembaultii*, which is white-spotted, *A. versicolor* following closely with yellow-spotted flowers. *Alstromerias*, however, bloom in August and onwards; and it was not those that I intended writing about on the present occasion.—G. ASHBY.

THE ROYAL HORTICULTURAL SOCIETY'S SHOW.—OCTOBER 19TH, 20TH, AND 21ST.

The objects in which competition was invited on this occasion were fruit and vegetables; and of the former there was a very good display, notwithstanding that no prizes were offered, certificates bearing a money value in proportion to their class and the amount of payments for admission being substituted. The receipts, however, must have been very small, at any rate the first day, for, though the weather was remarkably fine, the visitors not being either Fellows of the Society or exhibitors were few; nor could many be expected when the fashionable world is out of town.

The Grapes and dessert Apples and Pears were ranged on two tables in the conservatory, in one of which Messrs. Lane's pot Vines formed an appropriate centre, whilst the kitchen fruit, roots, and vegetables were placed in the arcade.

PIRES.—Only four were shown. A Queen from Mr. Mobbs, gardener to W. B. Tyringham, Esq., Newport Pagnell, had a second-class certificate; and a large and fine Cayenne from Mr. T. Ingram, gardener to Her Majesty at Frogmore, was first, and a Black Jamaica of 6 lbs. 9 ozs., but not in good condition, second in the Any variety class.

GRAPES.—Numerous and excellent bunches were shown both of Black and White kinds. In the latter three bunches of Muscat of Alexandria from Mr. Meads, gardener to Raikes Currie, Esq., Farnborough, were the finest we have seen this season, being large and compact in bunch, large in berry, and beautifully ripened—very different from Muscats as usually seen earlier in the season. The three bunches weighed 11 lbs. 13 ozs. Mr. A. Ingram, gardener to J. J. Blandy, Esq., Reading, was second with excellent bunches of the same kind; and Mr. Pottle third with large bunches.

In Black Grapes Messrs. Lane, Berkhamstead, were first with Muscat Hamburg, very large and well ripened; and second-class certificates were awarded to Mr. Meads for the same kind, weighing, the three bunches, 8 lbs. 3 ozs.; and to Mr. Potts, gardener to Mark Phillips, Esq., Stratford-on-Avon, for Barbarossa, 12½ lbs. Three bunches of Black Hamburg from Mr. Meads, weighing 8 lbs. 11 ozs., large in berry but not highly coloured, received a third-class certificate.

From Messrs. Lane came a fine collection of Grapes, including handsome well-ripened bunches, the berries being also large, of Esperione, Lady Downes', Muscat Hamburg, Black Hamburg, Dutch Hamburg, Bowood Muscat, Golden Hamburg, and Buckland Sweetwater. This collection added much to the interest of the Show, and well deserved the first-class certificate which was awarded to it; and Messrs. Lane received a similar distinction for the fine collection of Vines, Pears, and Oranges in pots, the former loaded with excellent bunches. Still more interesting was the collection of Grapes grown in the conservatory at Chiswick, and consisting of thirty varieties. Among them were two bunches of Barbarossa, the one a very large bunch weighing 6 lbs. 13 ozs., produced by a Vine on its own roots; and the other borne by a Vine grafted on the Black Hamburg, which though only weighing 3 lbs. 13 ozs., was very compact and handsome, more regular in the size of the berries, and much better coloured. The two Vines were grown under precisely the same circumstances, and the

difference in their respective productions can therefore only be attributed to the influence of the stock upon the graft. The other Black Grapes were also well represented in Frankenthal and other Hamburg kinds, Muscat Hamburg, Lady Downes', Oldaker's West's St. Peter's, Burchard's Prince (another first-rate late kind), Black Muskatka (which is seedless), Muscat Noir de Jura, Siderites Smyrna, Black Prince, Black Morocco, Esperione, and Morocco Prince. Of White kinds there were Canon Hall, Muscat of Alexandria (well-coloured), Raisin de Calabre (a good late-hanging kind), Bluessard Blanc, Golden Hamburg, Royal Muscadine, White Nies, White Frontignan, Royal Muscadine, and Reeves' Muscadine. Of Reds there were only three—viz., Ahbee, pale yellow, with a higher tinge of rose than usual, very beautiful but not very good; Chasselas de Falloux, purplish red, and Tokay des Jardins. Two excellent bunches with good-sized berries cut from the large Vine at Cumberland Lodge, and exhibited by Mr. Ingram, completed the list of notabilities in the Grape classes.

APPLES, both for dessert and kitchen use, were well and numerously shown, but owing to the peculiar character of the season many of the varieties of these, as well as of Pears, were much out of character. For six dishes of dessert Apples, Mr. Ford, gardener to W. E. Hubbard, Esq., Horsham, was first with Cornish Gillyflower, which is known to be at once one of the best and in general one of the ugliest of Apples, but in this case large and well coloured; Adams' Pearmain very fine, Red Pearmain, Scarlet Pearmain, Blenheim and Ribston Pippins, all of which were large and well coloured. Messrs. G. & J. Lane, St. Mary's Cray, and Mr. T. Ingram were second, the former with excellent examples of Ribston and Blenheim Pippins, Bull's Golden Reinette, Cornish Gillyflower, Summer Nonpareil, and King of the Pippins; the latter with Cox's Orange Pippin, Court-Pendu-Plat very highly coloured, Scarlet Nonpareil, Fearn's Pippin, and two seedlings. One of them called Ingram's Frogmore Nonpareil is stated to be an excellent long-keeping Apple, in use from October to March; in shape it is roundish, rather flattened; in colour greenish yellow, with russet markings. The other, Gipsy King, is much more attractive in appearance, resembling Court-Pendu-Plat in size and colour, and having an eye like the Blenheim. It has, we are informed, a firm yellow flesh, and will keep till June. Mr. Buster, Goring, near Worthing, was third.

In three dishes Mr. Ford was first with remarkably large and fine fruit of King of the Pippins, Golden Reinette (?), and Blenheim Pippin; Mr. Hall, gardener to Capt. Tyrrell, B.N., Baling, second with Blenheim and Cox's Orange, both very fine, and Ribston Pippin. Gravenstein, from Mr. Lee, Clevedon, was large and fine; and Fearn's Pippin, from Mr. Kails, large and very highly coloured.

Kitchen Apples, though not generally so large as we have seen them, were large for the season. Mr. Scrymger, Reading, stood first with Emperor Alexander, splendid, Blenheim and Yorkshire Greening, both very large and fine. Next came Mr. Lee, gardener to Viscount Combermere, Whitechurch, with Mère de Ménage, of a fine red all over, the six weighing 6 lbs. 10 ozs., Blenheim, and Flower of Kent; and Messrs. Lane, St. Mary's Cray, with Waltham Abbey Seedling, Blenheim, and Gloria Mundi. Third-class certificates were awarded to Messrs. Moffat and Sayers.

In addition to several collections of Apples for competition from Messrs. Potts, Bentley, Drewett, Beasley, Hall, Mobbs, Tivey, and others, there was a rich and varied display of 123 sorts from the Society's Garden at Chiswick.

PEARS were likewise numerous shown. The best six dishes were those from Mr. T. Ingram, gardener to Her Majesty, consisting of Beurré Diel, Beurré Clairgeau highly coloured, Glou Morceau, Van Mons Léon le Clero, and Chaudmont, the whole of which were very fine; and British Queen, a richly-flavoured cinnamon-coloured Pear of his own raising, and which has been already described in these pages as being of first-rate excellence. Mr. Scrymger was second with Glou Morceau, Marie Louise, Beurré Diel, Beurré Rance, Vicar of Winkfield, and Beurré Bosc; and Mr. A. Ingram, also of Reading, third with the first three kinds, Duchesse d'Angoulême, Van Mons Léon le Clero, and Beurré Bosc.

In three dishes Mr. Sage, gardener to Earl Brownlow, Ashridge, was first with Beurré Rance, Glou Morceau, and Duchesse d'Angoulême; Mr. Ford second with Glou Mor-

ceau, Thompson's, and Marie Louise; Mr. Lee and Mr. Willcocks third.

Kitchen Pears chiefly consisted of Uvedale's St. Germain, Catillac, and Beurré Rance, but none of them were remarkable for size. The first-prize lot from Mr. Bentley, gardener to Lord St. Leonards, Thames Ditton, consisted of the last two and Beurré Langelier. A collection of seventy-two dishes of Pears, comprising many interesting kinds, came from the Chiswick Gardens.

MISCELLANEOUS.—From Mr. Ingram, Frogmore, and Mr. Ward, Headington Hill, came excellent Salway Peaches, the former taking the first place; and of Plums, Coe's Golden Drop, and Ickworth Impératrice, were shown by Mr. Mobbs, and Mr. Sayers. Ruby Castle Currants from Mr. Tivey, the Hyde, St. Albans, were remarkably fine, even at this late season; and White Dutch from the same, and Mr. Ford, were also very good. Mr. Williams, gardener to the Hon. Mrs. Ives, showed good Morello Cherries, Dutch Medlars, and a basket of well-grown Citrons; Mr. Potts, a fine basket of Oranges and good Morellos; Mr. A. Ingram, Eugenia Ugni; Mr. Mobbs, Black Prince Strawberry, very good for the second crop; Mr. Ford, Quinces; and Mr. Whiting, the Deepdene, Meredith's Hybrid Melon. For the above objects numerous certificates were awarded, for which we must refer to the prize list.

VEGETABLES AND ROOTS.—The exhibition of these was meagre, with the exception of the Potatoes, of which a collection of fifty-six was sent from the Society's Garden at Chiswick, and to these we may take occasion to refer hereafter. The only exhibitor of Kidney Potatoes was Mr. A. Moffatt, who had Imperial, an excellent kind, Royal Ashleaf, Pink Fluke, Flesh-skin Kidney, Prince of Wales, and Lemon Kidney, a large and clean tuber, all of which were free from disease, and otherwise excellent. The same may be said of the Round kinds exhibited by Mr. Moffatt, among which were Daintree's, very sound and clean. Fortyfolds and Regents were shown in good condition by Mr. Ford; and a seedling called Hands' Freedom, said to be very good and productive, by Mr. Hands, Newcastle-on-Tyne; Chardon, a large knobby continental variety, stated to be very productive and useful for feeding cattle, by Mr. Veitch, Chelsea; and Lemon Kidneys, large and fine, by Mr. Bentley. Good Onions, Carrots, Beet, Incomparable Celery, Scorzonera, and Walcheren Broccoli, beautifully white and close in the curl, were shown by Mr. Whiting; White Belgian Carrots, Batavian and Curled Endive, by Mr. Veitch; excellent Salsafy, Scorzonera, Beet, and Turnips, by Mr. Drewett; Mushrooms, Beet, a Mammoth Gourd, weighing 123 lbs., and Dwarf Curled Savoys, by Mr. Young, Highgate; and White Stone Turnips, Endive, Early York Cabbages, and Walcheren Broccoli, by Mr. Ford. Tomatoes came from Mr. Morris, and Mr. Salter, those from the latter being called the Cherry kind, but in reality Pear-shaped; Aubergines from Mr. Potts; excellent Endive from Mr. Masters; Mushrooms from Mr. Rogerson; Peas from Mr. Tivey; and Brussels Sprouts, closely set with large sprouts, from Mr. Scrymger. For the certificates awarded, we must again refer our readers to the official list.

THE ABERDEEN STRAWBERRY TRADE.—As most people who are acquainted with our city know, the Aberdeen market-gardeners have for long been highly successful cultivators of the Strawberry. In respect to bulk and flavour the varieties of this excellent fruit grown by them will hardly be exceeded. Few people, however, we believe, have any very tangible notions of the actual extent to which the cultivation of the Strawberry has grown. We usually think of Strawberries in pints or quarts, not in hundredweights and tons; yet Strawberries by the ton have become an actual item of export, and during the present season the quantity brought into the market and sent southward, chiefly to London, to be manufactured into preserves, amounted to about 35 tons. This is independent of considerable quantities used at home for the manufacture of preserves on the wholesale principle, and for ordinary domestic use, &c., which must have brought up the total quantity to something like 50 tons; and if we take into account that a ton of Strawberries is worth from £25 to £30 (probably only smaller

quantities reaching the latter rate), it will be seen that this has become no unimportant branch of market-gardening. It is a branch, moreover, that promises to extend. It is only a few years since Strawberries began to be exported southward at all; but the demand is, we understand, very keen, and even beyond the supply, and contracts to the extent of 30 tons have been already entered into for next season, while some of the principal growers are considerably extending the breadth they have under cultivation. Of the Strawberries preserved by wholesale "curers" no inconsiderable part are exported to the Continent, and some even to India.—(*Aberdeen Free Press*.)

ZONALE GERANIUMS AT LINTON PARK.

(Continued from page 306.)

CLASS 4.—*Geraniums with flowers of a cherry, ruby, or salmon colour; foliage plain or horseshoe-marked.*

Rubens.—This old favourite is still deserving of cultivation, as its habit of growth, free blooming, and general adaptability to most situations give it a place in most collections. It is slightly horseshoe-marked, the foliage at the same time being downy.

Carulea.—Foliage, medium horseshoe marking; habit rather upright; flower-truss very good and well formed. It possesses a brightness about it of which most of the others in its class are deficient, and whether in a flower-bed or a pot it may be pronounced one of the best *Geraniums* grown.

Countess.—Somewhat like the last, but the individual flowers are less perfectly formed, and less bright; in habit of growth and freedom of flowering there is little to wish for in it.

Madame l'Abbé.—Strong grower; slight horseshoe marking; flower approaching somewhat to a rose. With me, however, it flowered late, but it may have been prevented doing so earlier from other causes than its own disinclination to flower.

Hector.—Habit good; dark horseshoe marking; flowers produced freely, of a pretty rosy salmon colour. Not being sufficiently tried I cannot say more than that it promises well.

Rose Perfection.—This scarcely belongs to this class, its flower being a sort of happy medium between rose and pink. It is one of the very strongest of all growers, and in the past season bloomed remarkably well. The habit is upright, and the foliage only faintly marked with the horseshoe.

Conqueror of Europe.—Foliage with a darkly-marked horseshoe; flowers a sort of cherry salmon, of good form and habit. The plant is promising, but receiving it late in the season I cannot speak positively as to its merits.

Batazzi.—Nosegay. Slightly marked with a horseshoe. Like most of its class it flowers freely, and will no doubt answer well as a bedder.

CLASS 5.—*Flowers scarlet; foliage either plain or but slightly marked with the horseshoe.*

Punch.—Foliage slightly downy; habit strong and erect rather than spreading; flower-spikes well elevated above the foliage. A well-known variety, much grown and appreciated; it is much taller than Tom Thumb and others of that class, although much less than the next variety.

Mrs. Mayler.—A very strong grower, with immense trusses of bloom on long and stout flower-stems. It is of the same class as used formerly to be known as the Giant, Smith's Emperor, Sol, and I believe other names. It is better adapted for growing against a wall than for a bed, although a few plants of this surrounded by dwarfier ones answer very well, its very strong stems rushing up to a great height when they are protected.

Button's Perfection, called also, I believe, *Attraction*, is a somewhat strong grower, though much less so than those previously mentioned. It is one of the very best bloomers, and the trusses are large and fine; but with me this past season it was late—a fault I never before had to find with it, and for which I cannot account. Most growers admire it, and it is equally at home in a pot under glass.

Tom Thumb.—Notwithstanding all that has been said in favour of others, this is still unquestionably the most popular *Geranium* of the day. I am, however, convinced that there are more varieties than one cultivated under the name of

Tom Thumb, and where the spurious or inferior one exists it is quite possible other kinds may excel it. The foliage of Tom Thumb approaches nearly to what I have on more than one occasion stated to be what I want in a bedding *Geranium*—i. e., a clear bright green, free from horseshoe markings, and also from that downiness which gives a dull colour to the foliage, and which in some respects detracts from the merit of Christine and other varieties.

Royal Dwarf.—Somewhat like the last, but a less abundant bloomer, and instead of being dwarfier than Tom Thumb it is a more robust grower. It is, however, not by any means of a gross habit, but blooms and flowers well, and deserves a place with those who delight in a multitude of names.

Little David.—Dwarfier than Tom Thumb, very free bloomer, and well adapted for vases. It is of the same habit as Tom Thumb, and, like it, deserving of better treatment than some of the shy bloomers. Little David deserves a place in the most limited collection.

Crystal Palace Scarlet.—This, which I had also under the name of Trentham Scarlet, is of the Tom Thumb class, the foliage being a bright green; perhaps, however, the plant is a little more upright-growing, but this is a questionable qualification; and some growers of this variety insist that it is identical with what they have grown for years as Tom Thumb. The difference here is not sufficiently marked for me to say with certainty that it is distinct from that well-known variety, which I have had nearly twenty years. I would, however, advise all growers to try *Crystal Palace Scarlet*, and ascertain whether it is really distinct from and an improvement on Tom Thumb.

CLASS 6.—*Flowers scarlet; foliage more or less marked with the horseshoe.*

Queen of England.—Marking very dark; strong grower, somewhat upright; fine truss. Better for pots than for bedding-out, excepting for the centre of beds, or where a tall upright plant is wanted.

Compactum.—Marking very dark. This old kind seems to be eclipsed by others of its class, therefore I cannot recommend it, as I intend discontinuing its use after the present year.

Marvel.—Horseshoe marking only slightly shown; habit of plant good; flowers pale scarlet; petals large and fine. Standing the sun tolerably well, and being of a distinct tint from the bulk of our *Scarlets*, it promises to be a favourite.

Scarlet Globe.—Foliage slightly marked with horseshoe; habit strong and pretty good; flowers with a white eye, but in general they are small for so vigorous a plant, and not being remarkable as a pot plant, it may be discarded.

Blaser.—This is one of the Zonale class, having the markings composed of two or more colours, a class at one time expected to become fashionable; but having failed to produce a good effect in the flower garden, and those hitherto presented to us being somewhat leggy and ungainly for pot culture, they have latterly ceased to be noticed. Another feature they present seems also to be no particular qualification, the flower-stem is often white and semi-transparent. The flowers of this variety have a white eye, and as a scarlet are not without merit; but the irregular growth of the plant disqualifies it for all symmetrical work in flower-beds.

British Flag.—Fellow to the last-named, perhaps a little more robust, and the trusses of bloom a shade darker.

Adonis.—Dark horseshoe marking; flowers pretty good, light scarlet, somewhat like *Marvel*; habit good. It promises well, but not having many plants I cannot speak with certainty as to its merits.

Vivid.—I am somewhat uncertain whether the variety which we have under this name is true, it having a slight horseshoe marking. The habit is strong and somewhat upright; flowers in a large truss, bright, fine, and good.

Prince Imperial.—Of more dwarf habit than most of this class, and consequently better adapted both for beds and potting; flower-truss good, bright scarlet. One of the best of this section.

Stella.—This popular variety is more of a crimson than a scarlet, but is nevertheless often planted as one of the latter, and as such may be classed here. Of its merits it is needless to speak, as it shone pre-eminent in most of the public gardens around London, when it was put in competition

with other Geraniums; to those not acquainted with it I may say it is a sort of half Nosegay; habit spreading; foliage nearly plain green; flowers in fine trusses, and most abundantly. It is one of the memorials our late lamented fellow labourer Mr. Beaton bequeathed to the gardening world. Stella is very good as a potted plant, but thrives best when planted in a mass in a flower-bed.

Cybister.—I fear this is a still further departure from the scarlet, but I hardly know under what section to class it. I must in the first instance, however, say that my acquaintance with it is limited. Not having grown it until the present year, and that but sparingly, I cannot speak confidently on its merits, but may say it is more of the Nosegay breed than the last, the flowers being also more crimson. Many growers, however, speak well of it.

CLASS 7.—Flowers rose colour.

Trentham Rose.—This popular variety needs no comment, the plant being all that can be required in habit, and the flowers individually are as good as those of the majority of recently introduced varieties, and better than many of them; but it must be acknowledged that, viewed at a distance, the flowers have not the attractive colouring of Stella and some of the Scarlets—they are more for effect close to the eye. In habit the plant is spreading, and the foliage scarcely shows any horseshoe marking.

Paul l'Abbé.—A more robust grower than the last, with foliage distinctly marked with horseshoe. Flower-truss very large, and plant more upright-growing. For the centre of a bed this is a desirable variety, while its immense trusses of bloom are of themselves sources of much attraction.

Beauty of Midsloe.—This so much resembles Trentham Rose, that I am far from certain that they are not synonymous. More need not therefore be said about it.

Cerise Unique.—Having all but thrown this old variety away, I only mention its name as one of this class having a more upright growth, foliage marked with horseshoe in two colours, and the flower-stem white.

CLASS 8.—Flowers purple, or approaching that colour.

Magenta.—Slightly horseshoe-marked; strong grower, but spreading; half Nosegay; truss large and fine, and of the lovely colour implied by its name. Next to Stella, it is the most telling Geranium that can be planted, being of a colour hitherto not approached by any Geranium.

Imperial Crimson.—Nosegay; foliage small and plain green; habit dwarf; flowers good purple, and very abundant. A good plant for edgings or for a single line in a ribbon, the compactness of its habit fitting it admirably for that purpose.

Woodwardiana.—I am somewhat doubtful whether this be the correct name: if so, it is somewhat like the last in colour of flower, but more robust in growth. It is also a Nosegay, not altered by hybridising with the broader-petalled class.

Lucidum.—This old variety of the Nosegay class, the first I was acquainted with, excepting Harkaway, seems to degenerate, or other kinds have surpassed it in beauty and general qualifications. I shall discard it.

Purple Nosegay.—This once-popular variety becomes so leggy and bare of foliage that it no longer deserves cultivation, and compared with Magenta it is worthless.

Lord Palmerston.—Foliage nearly plain; flowers partaking of the Nosegay class, more of a crimson than purple; habit good and promising. Not having seen much of it, I must leave its properties to be commented on by others. It promises well.—J. ROBSON.

CULTIVATION OF SOME RARE WILD FLOWERS.

PRIMULA FARINOSA.

TOURISTS who visit the upper parts of Aire and Wharfedales during the months of May and June, are often charmed with the beautiful flowers of *Primula farinosa* (Bird's-eye Primrose), and bring back plants which they have collected in the moorland pastures. These are planted in the gardens at home, where they grow, and for a time all is well. If we

afterwards inquire after them we are told that the roots are dead and thrown away. Not so, the leaves were dead, but the roots were alive, though dormant, peeping out of the soil like a little bud, ready for growth early in spring to flower and please the collector who gathered them, and to serve as a memento of a visit to a wild but charming district.

This flower is one of my favourites, and was some years since gathered for me by a friend in the Craven district, where it grows very plentifully, and Baines in his "Flora of Yorkshire," informs us that it may be found varying from the purest white flowers to the deepest crimson. It is of very easy culture, growing in almost any kind of soil, and seems to do best in that collected from the sides of roads repaired with dross or slag from the iron works in our neighbourhood; but it will grow and do well in common garden soil. The best time to increase it is in spring as soon as the plants commence growing; if we then take up a root we find it composed of a number of little buds clustering round the family hearth. These are easily divided with the fingers, taking care that a small root is with every bud, and the small buds will flower the same year. If allowed to flower, and then divided, the roots are tough, and do not easily part, and few plants are obtained; these, if the weather be dry, seldom do well.—RUSTIC ROBIN.

PREVENTING THE FALL OF SPECIMEN PEARS.



I HAVE sent you a little box of Pears merely to show you an idea which struck me in the summer, as answering to keep large Pears from being blown down by the wind. I have before had a good many King Edward's Pears, but they were nearly always blown down before they were much more than half grown. Tying them does not answer, and I thought small net bags would do, and they have answered admirably. The bag should fit moderately close, as the Pear is not suspended by the bag so well if the bag is too large. I tie the string to the same branch unless the fruit is on the end of it, and then I tie it to an adjoining branch, so that the weight of the Pear is in the bag.—GEORGE LEE, Clevedon.

TODMORDEN BOTANICAL SOCIETY.

MEETING OCTOBER 3RD.

THE President in the chair. The President exhibited fronds of a most beautifully-crested form of *Athyrium Filix-femina*, lately gathered by him near Hapton. Mr. J. Sim, of Perth, sent a specimen of *Rosa alpina*, L., recently discovered on Kinnoul Hill, near Perth, by Dr. White, jun., of that city. This Rose is said to be new to Britain, and Dr. White may be congratulated on making so important an addition to our flora. Mr. Aitkin, of Bacup, exhibited specimens of *Alisma natans*, from the Vale of Llangollen. Mr. Halstead, of Bacup, a most indefatigable Fern-hunter, brought various interesting forms of *Blechnum spicant*, recently collected by him in the neighbourhood of Rossendale: one of these forms the President pronounced to be new. Mr. Halstead also exhibited fronds of *Scolopendrium*

vulgare crista-galli, a very fine variety, lately gathered in Sheddin Clough, and a curious dwarf Polystichum from the same prolific locality.

The Society's late excursion to the Isle of Man, of which the Secretary gave an interesting outline, was not nearly so well attended as we had been led to anticipate; the lateness of the season, and the miserably wet weather combined having apparently damped the ardour of most of the intending excursionists.

List of Plants Gathered on the Isle of Man Excursion:—

PHENOGAMS.—*Arenaria maritima*, *Anagallis tenella*, *Brassica monensis*, *Crambe maritima*, *Cochlearia danica*, *Hypericum androsaemum*, *Draba hirta*, *Saponaria officinalis*, *Lepidium Smithii*, *Pinguicula lusitanica* (very plentiful at the bottom of Growdale), *Pyrethrum maritimum*, *Conium maculatum*, &c.

CYPTOGAMS.—*Osmunda regalis* very abundant and fine, *Adiantum capillus-Veneris* (in great abundance on rocks and in caves close to the sea to the north of Glen Mea), *Asplenium adiantum-nigrum*, *A. trichomanes*, *A. ruta-muraria*, *Allosorus crispus*, *Blechnum spicant anomalum*, *B. spicant multifurcatum*, *Lastrea Filix-mas producta*, *Polystichum angulare paleaceum*, *P. angulare tripinnatum*, *P. angulare subtripinnatum*, *Polypodium vulgare semilacerum* (very abundant and fine at the waterfall, Glen Mea), &c.

PRESERVING WALNUTS.

REMOVE the husk and wash the nuts thoroughly in clean water. Now throw them into a saline solution made thus—water one gallon, common salt $\frac{1}{2}$ lb., nitre 1 oz. The nuts are not to be kept in the solution longer than is required to put them into it and take them out again. Place them upon a sieve to drain, then wipe them with a rough cloth. Now pack them, where you will, with cocoa-nut refuse, or with broken charcoal. When required for table they should be washed and dried. Walnuts thus treated will rarely become mouldy; nevertheless, like all things of this earth, they ought to be "looked to" now and then, for one rotten Apple will spoil a bushel.

As a general rule cellars are not the places to keep Walnuts, because there are therein always the sporules and germs of mould-forming plants.—SEPTIMUS PIESSE, *Chiswick*

FOUNTAINS.

"A SUBSCRIBER" wishes to know what kind of fountain would look well in a moderate-sized garden. It is to be placed in the centre, where four gravel walks meet at right angles. One of the walks extends 180 feet long, and the fountain will be about 90 feet from the drawing-room windows. The gravel walks are 8 feet wide, and it is intended for the walk round the fountain to be about 5 feet wide. The fountain, including the basin, must not be more than 11 feet in diameter. Which is thought better, iron or composition of stone? and what height should it be?

[The question of fountains is one chiefly of taste, position, and the supply of water, and the information you give us is too scanty to enable us to advise you as we would wish to do. There is a difference between a mere basin and a fountain. The one is merely a receptacle of water, giving little or no indication as to how the water is to be supplied; a fountain, on the other hand, indicates more or less the outburst of water from a jet, and which presupposes a natural or artificial reservoir of water at a much higher level than the fountain. Such a fountain is always best placed in a valley, because then the surrounding heights will always give the idea of its being natural. A fountain on elevated ground always shows that if that fountain is to play it must be through means of water raised mechanically to a still greater elevation. The command of this water ought to regulate the size of the fountain or basin, and the height which it appears above the ground level. For a fountain 11 feet in diameter of basin, if the basin is 2 feet or 18 inches above the ground level, we think it would be enough; and a raised figure in the centre in the shape of a mermaid or triton, or even several smaller basins, one above the other, the water coming out of the uppermost, or even out of them all, would

look very well. The height above the basin may be from 3 to 10 or more feet, according to the supply of water. Iron, we believe, would be best for such decorative fountains, to be painted and sanded when wet. Perhaps one of the best ways would be to build the tank or basin with brick and cement, and have an iron coping dipping down some 15 inches into the water. Such fountains should either be empty or covered up in winter. The best plan is to empty all the supply piping at any rate. Composition will be apt to trouble you after severe winters. We incline to the iron, but both are good when no water is left to freeze. Even stone will crack if left wholly exposed with water in it in winter. We cannot recommend makers, nor is there need, as there is no lack of them.]

ENTOMOLOGICAL SOCIETY'S MEETING.

THE October meeting of the Entomological Society was held on the 3rd inst., Francis Pascoe, Esq., F.L.S., President, in the chair.

A case of insects of various orders containing many rare species, especially of the genera *Bolbocerac*, *Hesperia*, and *Mantis*, collected in India by Lieut. E. C. Beavan, was presented to the Society by that gentleman.

Three minute species of Beetles belonging to the family of the Rove Beetles, *Staphylinidae*, were exhibited by Mr. Sharpe, as new to the British lists, and which had been collected by that gentleman in Scotland.

A box of insects collected on the coast of Brazil, from Rio Janeiro to Monte Video, by Mr. T. Pullinger, R.N., was exhibited by Mr. Lanson.

The President exhibited two remarkable species of Beetles recently received by him from Australia, belonging to the genera *Attractocerey* and *Cyphagogus*.

Mr. Wallace stated that he had captured several species belonging to the former of these two genera during his residence in the Eastern Archipelago, and that they were wood-feeders in their economy.

Mr. Doman exhibited the rare British Moth, *Botys asinialis*, which he had captured during the month of August last near Lyme Regis.

Major F. Parry exhibited a box of insects collected at Gibraltar by one of his sons, also a *Curculio* from Brazil, from the body of which a number of elongated vegetable filaments had been produced, belonging apparently to the genus *Sphaeria*.

Professor Westwood stated that he had illustrated and described several similar examples of these vegetable parasites in an early volume of the Society's "Transactions," and that there appeared to be several very distinct, and probably undescribed, species of fungi which attacked insects preserved in cabinets. One of these is remarkable as being composed of very fine threads of such great tenacity, that in cleaning the insects from the mould the tarsi of the specimens were often pulled off. The subject was very deserving of the attention of microscopic botanists.

A memoir by Mr. Baly, containing descriptions of new exotic species of Plant-feeding Beetles (*Phytophaga*) was read.

Mr. F. Bond stated that he had found that several partridges which he had lately shot, had fed upon the larvae of *Agrotis segetum*, which had this summer and autumn proved so destructive to the root crops throughout the kingdom.

CULTIVATORS OF THE SOIL IN ILLINOIS.

In this prairie State are some of the largest farmers of their own lands in the world, many of their corn fields containing 500 to 1000 acres, where the reaping machine has ample room and verge enough to display its powers. Without this great saver of labour, in a country rife with fever and ague, the crops must otherwise be lost from want of hands in harvest time.

Among the great farmers of the State are Messrs. Jacob Straun, Ike and Jemi Funch (brothers,) and others holding several thousand acres, the landlord and tenant system being unknown. Mr. Straun held about 30,000 acres, almost rivaling Job in the number of his quadrupeds. He used to supply

by contract all the butchers of St. Louis, a city then having 120,000 beef-eaters, the prices being fixed once a year. Beef falling in price, the butchers thought they should throw up a bad bargain, and refused taking his cattle. Mr. Straun sent his men through the neighbouring district buying up all the fat cattle and selling them at Cincinnati and other towns, or sending them east, so that for a month the citizens of St. Louis were without a roasting joint, when the butchers had to "cave in," or surrender at discretion.

This monarch of quadrupeds riding along and seeing a young lady milking a cow asked for a drink, which the milk Hebe gave him. He then inquired if she knew who he was, to which there was a yes, when he popped the question of marriage, to which another yes was given. Returning the same way a few days after, he called at the farmer's house, where they were at dinner, and not recognising his sweetheart among half a dozen of sisters, he requested the young lady who accepted his offer to stand up, which was done, and they were soon after man and wife.

The Messrs. Funch may at present be the largest farmers in that great State; one brother owning and working 32,000, and the other 17,000 acres of prairie—the former annually selling in Chicago £12,000 worth of cattle and hogs, the produce of his own fields. They were among the first pioneers of the State; one of them on marrying trading a hat with the clergyman performing the service, and getting back a pig in exchange. In these early days the Western farmers were addicted to euker and poker, as well as whiskey drinking, though now very temperate, and on an occasion when one of these gentlemen found his neighbour card-sharping, he pulled the leg from the table and cracked the cheater's pate. Greater punishment has often been inflicted in the Mississippi steamers on the gamblers by nailing their hands to the table with the bowie knife, which is only withdrawn with the false card.

An amusing incident took place at the American Hotel, Springfield (where President Lincoln practised as an attorney and counsellor at law, with a monster sign-board over his door). Several large farmers, in wet weather, put up at the hotel, turning into the sheets with their mud boots on and discolouring blankets, bed, sheets, and quilt. A short time after they again called, but were refused admittance or lodgings, when they put an advertisement in the papers through the States calling on their brother farmers not to stop at the American; but a counter one was inserted by the landlord, giving his reasons for turning the gentlemen out of doors, and no doubt most of our readers will consider them conclusive. Neither Messrs. Funch nor Straun were on the printed list, but it comprised the names of some of the wealthiest and largest farmers in the West.

Fat salt pork and beans form the chief food of the Western farmers, who might live like princes on the barn-door fowl (if they would only feed them) and prairie chickens (grown) and quail, as well as other game, and fish when in season. Vegetables they never think of, though the prairies would produce them in abundance. As to tea, it is "cisalpine," uninjured by a sea voyage, being chiefly manufactured in Philadelphia and Boston—one-third of that used in the West being "Bogus." In one wholesale house in the western metropolis, where the stock was 2700 chests, over 900 were home-made. The farmers must have tea at 1s. per lb. The country store-keepers must have it at 9d. per lb., to supply the farmers, and the wholesale merchant must have it at 6d. per lb., to give him a fair profit; the Philadelphian or Boston "wooden nutmeg" tea-maker getting 6d. per lb. for drying and colouring leaves.

A SUGGESTED COMPROMISE.

A MEDICAL friend, who has combined the study of natural history with that of surgery for many years, on hearing my bitter complaints of the destruction of the buds of my Gooseberry bushes by the birds in winter and early spring, recommended to me as a certain antidote to sow a few patches of Barley and white Clover in the neighbourhood of the trees. The birds, he says, must have green food at that season of the year; and so long as they can procure the tender blade of the Barley, and their still more favourite leaf of the white Clover, they will not condescend to meddle

with the coarser production of the Gooseberry. The trial will be simple and inexpensive, and is certainly worth making. —T. S.

LATIMERS.

THIS delightful residence of the Right Hon. Lord Chesham is beautifully situated on a commanding eminence two miles from Chesham, three from Amersham, and six from Rickmansworth, the latter being the nearest place by which at present access can be had by train. By the latter we took our route, and after passing some finely undulated scenery, and the pretty village of Cheney's, and its church with its elevated spire, more than a mile distant from Latimers, we ere long crossed a rustic bridge, attended by a noisy waterfall of the Colne, and, after climbing a steep hill, arrived at the commodious and picturesque cottage of our friend Mr. Donaldson. The more proper entrance, we presume, would have been by the farm at the southern side of the lake, from which a nice approach, after passing over a bridge with a fine view of a deep cascade, winds up to the mansion, the building being as a matter of necessity amid the swells and undulations of this part of the Chiltern Hills. Just opposite the roadway from Mr. Donaldson's premises is a splendid Elm, with a seat placed round its bottom, on which those tired with the ascent may "rest," and thus far "be thankful," the Elm dividing upwards into five large stems, and its main circumference at some 4 feet from the ground being fully 18½ feet. From this position the approach soon forks, one part going westward to the stables and onwards, passing the north side of the kitchen garden, and the other going south-west to the offices and mansion.

The mansion is a noble Elizabethan building, with the carriage entrance on the east side, the flower garden on the west, and a terrace garden of gravel and grass on the south front. Westward of the mansion, and on both sides of the river, the park scenery is continued; and north of the flower garden the principal part of the pleasure grounds are situated, containing many nice specimens of the best young Conifers, Hollies, Yews, &c.

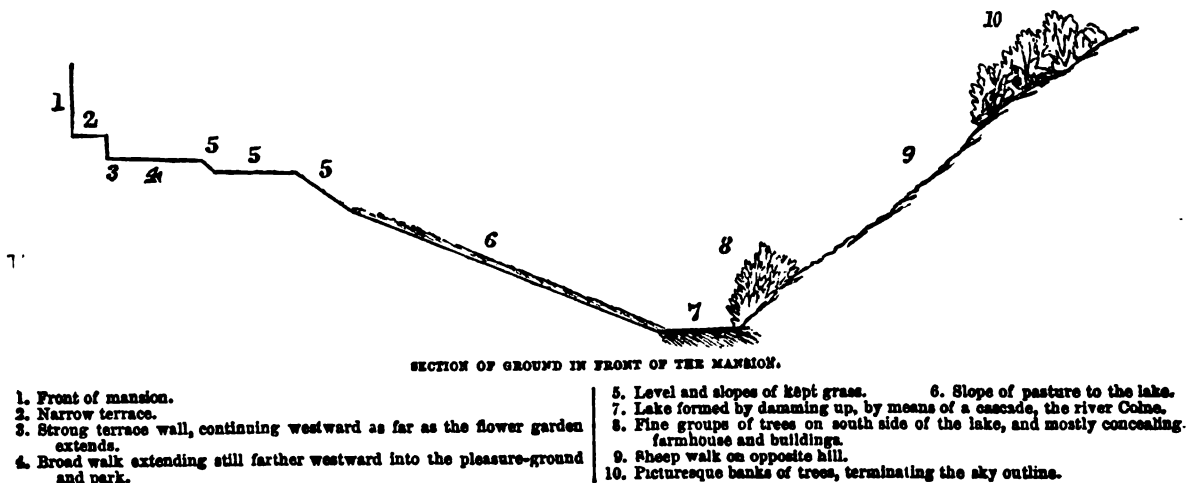
Having satisfied ourselves with the beauty of the east front, and the picturesque outline of shrubs and trees by which the gravel was surrounded, we entered on the south terrace, and the beautiful prospect far more than counterbalanced the trouble of climbing up and descending the undulating hills. We will just for the present leave details, and take you with us, whilst we stand together on the gravel in front of the terrace wall (see section of ground from memory). There, right before you is the beautiful turf with its slopes and levels, and the pasture ground down to the lake almost as fresh and green; the lake itself clear as a mirror, and only needing the dash and the spray of the cascade to be seen to enhance its beauty; the fine trees here fringing its farther bank; the bold sweep of the sheep walk beyond, which could only be more beautiful if more extended, bounded by plantations farther to the south, and forming the sky outline. To the westward the vale, with its undulating banks on each side of the river, opens up broader and wider, and the trees are grouped, and the plantations fringed and curved with rare picturesque effect. Eastward, after the eye has wandered over diversified scenery, it seems to linger on the top of the spire of Cheney's church, the church itself, as well as the village, being concealed by the surrounding woods, and the whole forming a panorama of the beautiful not soon to be forgotten.

Amid all this beauty there was just a trifle that seemed to jar on the unity of the scene, and we feel glad we noticed it, because the explanation was so satisfactory and honourable to all the parties concerned. Just opposite the mansion the boundary of the farther woods (10) stands out almost in a straight line, contrasting unfavourably with the bold massive scenery to the eastward, and the picturesque outlines to the west. This led to our being informed of what otherwise we should never have guessed—that the wood with the straight line, as well as the land up to Cheney's on that side of the river, belonged to the Duke of Bedford; and that though the Duke had let the land to Lord Chesham, and given him full powers to do with the trees as he liked, there might be a little delicacy in meddling even with the young woods. One thing is certain, that the removal of a

few young trees, so as in this one part to take away the stiff outline, would be a great improvement.

When cottagers, as well as squires and noblemen, are apt to quarrel and be very conservative as to their landmarks, it is pleasing to find our highest aristocracy, instead of making these landmarks conspicuous, showing rather their anxiety that their property, if possible, should be made to contribute to the interest and the beauty of the residences of their neighbours. We were here reminded of what, if time and circumstances had permitted, we should have mentioned long ago, the great-heartedness in similar circumstances of the Earl of Derby and Lord Sefton, whose rides and drives so meet and continue on their separate demesnes, that a stranger would have no means of knowing, without being informed, on which nobleman's grounds he was passing.

Though, therefore, part of the scenery to the south-east may not absolutely belong to the proprietors of Latimers, they may well rejoice in and enjoy its beauty. Here we have been reminded of a striking passage in the first volume of "What Will He Do with It," by the great novelist and statesman, Sir Edward Lytton Bulwer Lytton, where alluding to diversity of scenery, "The new villas, or old manor houses on lawny uplands, knitting as it were together England's feudal memories with England's free-born hopes; the old land with its young people; for England is so old, and the English are so young;" and he goes on to tell us how, in their wanderings, "the grey cripple and the bright-haired child often paused and gazed upon the homes and demesnes of owners whose lots were cast in such pleasant places. But there was no grudging envy in their gaze, and therefore,



they could enjoy and possess every banquet of the eye; for at least the beauty of what we see is ours for the moment, on the simple condition that we do not covet the thing that gives our eyes that beauty. As the measureless sky and unnumbered stars are equally granted to king and beggar, and in our wildest ambition we do not sigh for a monopoly of the empyrean, or the fee simple of the planets; so the earth too with all its fenced gardens and embattled walls, all its landmarks of stern property and churlish ownership, is ours too by right of eye. Ours to gaze on the fair possessions with such delight as the gaze can give, grudging to the unseen owner his other, and it may be more troubled rights, as little as we grudge an astral proprietor his acres in Capricorn. Benignant is the law that saith, '*Thou shalt not covet.*'" Ah! a grand thing it is for us working men, *this right of eye.*

Coming to the details, we may mention that the upper terrace of grass, marked 2 in the section, seemed narrow for the size of the house. It was level with the top of the wall 3, which is a very substantial affair, and built of square blocks of light stone, alternating with one seemingly of flint or various coloured granite. This gave a variety to the look of the wall, and on the whole we think made it more interesting than if it had been all of one colour, as both of these lozenges contrasted with the red colour of the mansion.

This wall extends as far as the flower garden does. There is no balustrade separating the upper terrace from the lower terrace, but large, massive, sculptured stone vases were set all along at regular distances, and were well filled with Scarlet Geraniums, &c. This answers very well just now, as we do not consider the flower garden quite finished; but when it is, either a low balustrade would be required, or an increase in the number of vases.

Beautiful as the grass terraces looked, still there is an appearance of baldness in the beauty, owing to the south front, with the exception of the vases on the top of the terrace wall, having no shrub or tree to distract the attention from the lawn, lake, &c. We think the baldness would be best remedied by some elegant tubs with Portugal

Laurels being placed along the south side of the walk, the tubs being a mere make-believe for artistic effect, the roots being chiefly in the ground, as Mr. Henderson managed them at Trentham. Irish Yews every 30 feet or so would also have a good effect. Vases with flowers would add richness but do much to neutralise the unity of the scene, as with the exception of these vases on the terrace-wall, we have yet seen no flowers, nothing to distract the mind from the green turf and the picturesque scenery. These nicely-trained Laurels, &c., would add the artistic to the picturesque, the artistic where it should be seen near such an elegant mansion, and that without interfering with the distinct unity of expression in this south front, which the introduction of floral ornaments would be sure to do.

No doubt many of our artists would like to lay down a parterre on the wide space of lawn between the first slope, and no doubt it would look beautiful and be quite in its place, were there no other flower garden. But let it not be forgotten, that one of the chief charms of Latimers is the distinct interest associated with each of these three fronts of the mansion. Break up the fine breadth of lawn here and this diversified interest is gone. We hope the south front will remain as it is, a standing rebuke to the growing practice of sticking flower-beds here, there, and everywhere, to the destruction of everything like repose, rest, and breadth of view. The poet has sung of

"Water, water, everywhere,
And not a drop to drink."

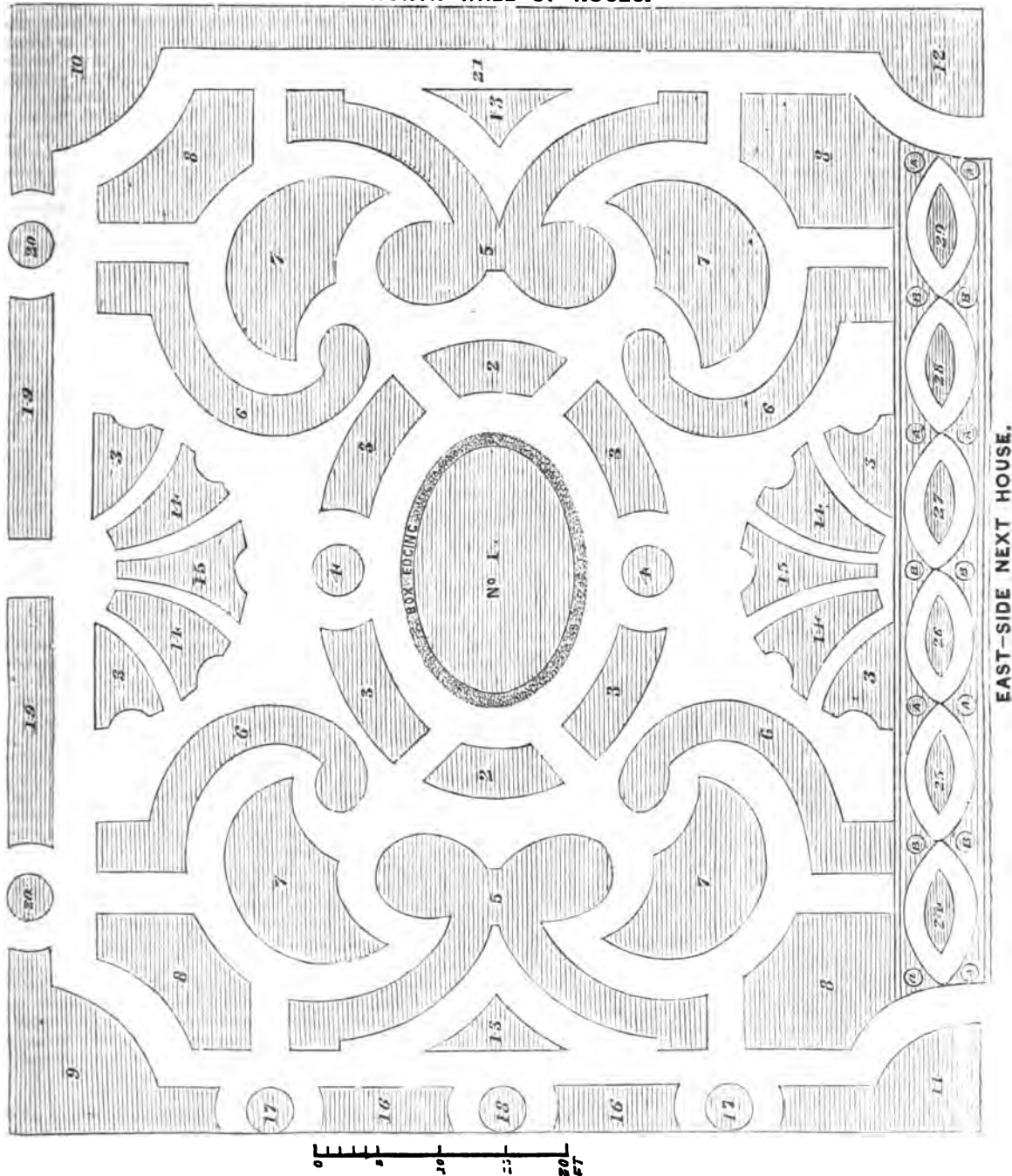
If we go on as we are doing, we will want another poet to sing of "Flowers, flowers, everywhere, and not a bit of green grass on which to stand and see them."

We now, however, leave this terrace and mount the steps to the flower garden on the west side of the mansion, this garden being on the same level as the upper terrace (2) on the south front, and the same wall (3) being continued on its south side. We had heard of this flower garden, and formed high expectations of it, as some of our readers may recollect what we said of the beauty of the flower garden at the Hyde when under Mr. Donaldson's management. The arrangement and the blending of colours were everything

1. Alma Geranium and blue Lobelia in rings alternately.
2. Stella Geranium.
3. Purple King Verbena.
4. Helen Lindsay Geranium, Roses.
5. St. Clair Geranium, edged with Christie.
6. Perilla, edged with Cloth of Gold Geranium.
7. Frognore Improved Scarlet Geranium, edged with Brilliant Geranium.
8. Aurea floribunda Calceolaria, edged with blue Lobelia.
9. Bijou Geranium centre, all round Attraction Geranium, next row Coleus Verschaffelti, outside row Cineraria maritima.
10. Bijou Geranium, Trencatham Rose, Amaranthus melancholicus, edged with Alyssum variegatum.
11. Bijou Geranium, Attraction, Coleus Verschaffelti, edged with Centaurea ragulina.
12. Bijou Geranium, Comte de Morny, edged with Amaranthus, outside row Alyssum.
13. Ariosto Improved Verbena.
14. Tropaeolum Eolipse (scarlet).
15. White Ivy-leaved Geranium.
16. Herald of Spring Geranium.
17. Madame Vancher Geranium.
18. Magenta Geranium.
19. Rubens Geranium.
20. Mrs. Ferguson Petunia.
21. Ribbon—back row Amaranthus, middle row Comites of Warwick Geranium, front row Lobelia.
24. Verbena Na Plus Ultra (pink).
25. Melitropae Etolie de Mar-seilles.
26. Mimulus cupreus.
27. Verbena Duc d'Angoulem.
28. Lobelia Paxtoni.
29. Pink Ivy-leaved Geranium.
30. Cloth of Gold Geranium.
31. Single plants.
32. Coleus Verschaffelti. Single plants.

Next the house is a mixed border, running the entire length of that side, with grass between it and the broad gravel walk, which terminates in steps leading to the terrace on the south side. In front of the terrace wall is a ribbon-border, filled with Trencatham Rose Geranium, Purple Verbena, and Alyssum.

NORTH-WALL OF ROSES.



that could be desired. The broad band of Box round the central oval told remarkably well. Did we wish to be hyper-critical it would be to say that the small circles in the chain

pattern would have looked as well if all had been planted with the same thing. The four twists of Perilla were just high enough, but half an hour's nipping would have made

them perfect. A few days before the end of September most likely they were the right height, and most probably were so by the 1st of October. It was easy to see that heights were studied carefully, as well as colours, a matter of great importance in a symmetrical arrangement.

Being a distinct garden for flowers, what we have said above of breadth of view does not at all apply, as it forms of itself a separate feature of interest. Beautiful as it looked, however, and well as it was managed, two changes seemed to be necessary to render it complete. The garden is more a parallelogram than a square, being something like 38 yards by 34 yards. The whole plan is beautifully balanced and harmonious, with the exception of the four outside, all of which are different. The two opposite sides should be the same. There need be no difficulty with the north and the south side. To make a handsome chain-border on the west side, as well as next the mansion, would require a little more encroaching on the lawn. To do this would necessitate the removal of a Horse-Chestnut tree at the north-west corner, more valued than its appearance would indicate—more especially as there are better and more interesting trees in the background; and also the taking away of a Beech tree or two at the south-west corner. The removal of these would also be an advantage to the high-keeping of the garden, as the leaves of the Chestnut soon begin to fall, and every yellow leaf in that garden would mar its beauty. Then, secondly, to secure the idea of completeness the garden should be distinctly bounded. This is done now on the south side by the terrace wall and vases; on the east side by the mansion, fronted by the broad walk of gravel, there being room for a similar walk between the garden and wall on the south side. On the north side there is the wall for Roses, the top of which meets the steep sloping bank of turf northward; but on the west side there is no boundary—no background to reflect and concentrate the brightness of colouring. A few yards of balustrading on the top of the north wall, close to the mansion, and in character with it, furnish the key note as to what is required. Continue that balustrading all along that north wall, a similar balustrading, but on a lower level, on the west side, and either continue it along the south terrace wall, or multiply the vases there by placing smaller ones between the rich stone sculptured ones.

(To be continued.)

R. FISH.

WORK FOR THE WEEK.

KITCHEN GARDEN.

MAKE it a rule never to allow the haulm, leaves, &c., of plants to remain on the ground when the crop is gathered, a convenient place outside the garden should be appropriated for the garden refuse; and before the leaves, &c., are wheeled to the heap, let a sprinkling of ashes or charred refuse be placed over each layer, by which a heap of valuable manure will be formed. While the ground is dry, proceed with digging up vacant spaces, throwing it into ridges that the land may be more effectually exposed to the influence of frosts. It should be a rule to double-spit or trench land every alternate year at least; but when two crops are taken off the same place yearly, trenching should alternate with digging each time the ground is cropped. *Cauliflowers*, as they are easily damaged by frost go over them frequently, and tie the leaves over the advancing heads. A portion of the less forward may be removed to spare pits or frames to succeed, or laid in deeply in a sheltered place, with their heads inclining towards the north, to be protected with straw or mats from frost. *Cauliflowers* under glasses or in frames may during the mild weather have air very freely. *Carrots*, having finished their growth should be taken up, and stored away for use. *Potatoes*, those that have been taken up and stored should be looked over and sorted; one rotten Potato will infect half a dozen. Others not yet taken up may now be dug. *Spinach*, go over the winter *Spinach* with the hoe, and follow with a dressing of soot. This useful winter vegetable requires strong stimulating manures to have it in perfection.

FRUIT GARDEN.

The planting of fruit trees either in the open quarters or against walls may be commenced as soon as we have a good

soaking rain. In planting odd trees between old-established ones against walls, a hole of considerable size should be made for the young tree, and refilled with fresh compost. In preparing new soil for planting fruit trees endeavour to keep it as dry as possible, and choose a dry day for planting that the soil may be in a favourable state for the growth of fresh roots during the autumn. The present time, after rain, is likewise the most favourable for relifting and root-pruning such trees as are too luxuriant and require checking, to induce a fruitful habit. We prefer lifting the trees entirely, unless they are very large, to cutting off the roots as they stand. After shortening the roots proportionately to the strength of the tree, spread them out near the surface, and fill in with compost, on which a mulching of half-rotten dung should be spread to prevent frost from penetrating the ground. Though the above is often necessary with existing trees planted in too rich or too deep borders, it should be borne in mind that it is only a palliative measure, and in the course of a few years will require repeating, unless measures are at the same time taken to make the border shallower or poorer, as the case may be. We are of opinion that wall trees would be more fruitful were their roots confined to borders of very limited extent compared with what is generally the case, and by which the balance between the roots and branches could be adjusted without the trouble and expense of root-pruning. Clear off the remaining leaves from wall trees to give the wood the advantage of sun and air to assist its ripening.

FLOWER GARDEN.

Before the flower-beds and borders have received the first shock from the approaching winter, the final remarks for the season should be made as to any re-arrangement of height, colour, or kind in the ensuing spring. This is more especially necessary when alterations of any kind in the design of the garden are intended. When the beds are cleared of decayed matter, a quantity of such biennials as the dark Wallflower, Sweet Williams, &c., may be planted, or bulbs for a late display. Let Dahlias, Carnations, and tender plants of all kinds be looked to, it may be necessary to pot some things for spring propagation. Ornamental climbers on trellises, arcades, &c., in blossom, should have protection on nights of a frosty character. Much valuable blossom may sometimes be insured by very simple means, as it not unfrequently happens that after one or two severe nights the weather becomes mild for weeks.

CONSERVATORY AND GREENHOUSE.

As the beauty of out-door scenery passes away before the storms of autumn, the conservatory should be made as attractive as possible, as it will now become in some measure the only place where flowering plants can be seen with comfort in unfavourable weather. To assist, let the requisite arrangements, both as regards watering and changing the plants, take place early in the day that the effects of the watering may be removed, and an agreeable dryness pervade the house before it is visited by the family. No pains must likewise be spared to keep the house gay, by introducing plants in succession as they come into bloom, including a portion of the stove plants which have been grown expressly for this purpose. A little gentle forcing will bring the different varieties of *Epiphyllum* into bloom, and with the addition of *Chrysanthemums*, late *Fuchsias* and *Pelargoniums*, *Pancratiums*, *Amaryllis*, *Mignonette*, *Neapolitan Violets*, &c., a tolerably gay appearance may be maintained until the time when forced plants will be more generally available.

STOVE.

The weather has been most favourable for ripening the succulent shoots of free-growing plants. When opportunity offers, therefore, do all you can to ripen the young wood, for it is in this way only that you can expect to get well through the winter. The temperature of the stove may now decline by night to 65°.

FORCING-PIT.

Keep the temperature of this structure by night at 60°, and increase it by day, if necessary by fire heat, 15° above the night temperature. This will assist Nature in flowering the few plants and bulbs which bloom in anything like perfection during dark November.

PITS AND FRAMES.

Everything should be finally arranged here as soon as

possible. See that the *Mignonette* has a very light situation, and is plunged close to the glass and free from drip. Store *Verbenas* growing freely should have their tops pinched, as also *Petunias* and other ordinary mass flowers. Give all the air possible. Intermediate Stocks intended for next year should be kept dry. Neapolitan Violets to have as much air as possible.—W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

Plenty of rumours of rain, but none has fallen here. Watered Cauliflowers, Lettuces, Cabbages with sewage water. Tied and earthed up Celery. Gave also a little water to Scarlet Runners still fruiting beautifully. Covered and tied Endive. A capital plan where no glass protection can be given is to grow in rows from 2 to 2½ feet apart, render it large by good treatment, tie up when dry, and then earth up, leaving only the top exposed. If in rainy weather a board is laid along the top the damp will be kept out. For common purposes nothing answers better for early work than giving the plants of the Large Curly a rough tie, and then placing slates, boards, or tiles along them. We generally, for all the flat-growing kinds, merely cover with boards, or place a few inches of dry tree leaves over them.

Hoed among young Onions, Spinach, Strawberries, Lettuces, &c., as the rougher and opener the surface the better will they stand all changes of wet or cold that may ere long be anticipated. As soon as we have time we will take up the most forward Carrots, Salsafy, Scorzonera, Beetroot, &c., as they keep so much better when taken up dry. Laid broken leaves over Cauliflowers, alike to keep them white and prevent frost from affecting them.

Mushrooms.—Had a piece more put in the Mushroom-house. Our beds under the thatched shed have done wonders, and are still producing profusely. We examined the bricks we made for spawn, and find it is running very slowly, and therefore made up a little bed of litter, and packed it on the bed to give it a speedier action. Much good spawn is spoiled by over-heat and over-wetness; but no good can be done without good spawn, unless we treat a bed so as to make it become a bed of spawn naturally, and to do that requires more time than we can spare in general.

We had an instance of this the other day. We generally put our *Calceolaria* cuttings into a low brick pit, the inside being considerably below the outside surface. But for this we would have done nothing inside; yet fearing that under the circumstances we might have too much damp, we placed about a foot deep of rather dry litter in the bottom of the pit, on which we placed the compost for the *Calceolarias*. When the *Calceolarias* were transplanted about March other things more tender were transplanted into that pit, and then after May the same place was used for plants in pots, low enough to stand under the glass, neither the litter beneath nor the soil being removed. Several times lately we noticed our man with armful of nice Mushrooms from among the flower-pots, which would have been valuable if we had not the supply from the thatched sheds. On removing the surface soil almost the whole bed was a mass of run spawn. No doubt there had been a few droppings in the long litter, leaves, and stubble that formed the understratum, and most likely it contained spawn or spores; and here these had been extending ever since the end of October, 1863, and only began to produce Mushrooms freely a few weeks before we were under the necessity of clearing the bed out. That bed, covered with glass and protected from frost, we have no doubt would have produced heavily all the winter. Such masses of spawn are very good for placing anywhere, to obtain a little heat and moisture, and they will then produce well when slightly covered with earth. Such spawn is generally too far run to be useful for running in a fresh bed; but lots of Mushrooms may be obtained from it in an emergency by the above process, when it generally soon exhausts itself.

Tomatoes.—Gathered the last of these, which have been quite at home this season. A number of years ago we made some excellent sauce in a very simple way, simpler than any we have seen in the books, and we believe the recipe was in the Journal, but we have now forgotten it and cannot

find it. We knew there were a few bits of Capsicum, Horse Radish—a very little bit cut fine, and some Shallots, with pepper and salt to taste. Will some kind friend give a simple recipe, which without much trouble will give us a sauce that will stand over the most of the next summer?

FRUIT GARDEN.

The wind being very boisterous, and our friends the birds having commenced pecking our best Pears, we have gathered the greater portion of our fruit. Looked over, also, that previously gathered, and as we will want more room in pits and frames, have been wheeling out rotten dung ready to go between the rows of Strawberries, &c. As time permits, we will go on pruning a little, as it is more pleasant doing it now than in the depth of winter.

Orchard-house.—We intended shifting a few trees that are in smaller pots, but have not been able to touch them yet. We rather think we must wait for a wet day, when out-door work must be given up. As stated the other week, trees in pots from 13 to 16 inches in diameter, will want potting but seldom. We have had heavy crops of fine Pears in pots not more than 9 inches in diameter, and, of course, if to be continued these would require more room. For the larger size of pots, we are quite sure that the mode described by Mr. Rivers last week is the best—namely, good top-dressing. Our half or three-quarters plunging our pots was chiefly owing to deficiency of water, and to save so much watering. We are well aware that trees with pots exposed under glass, do not suffer from sun heat in summer so much as those exposed out of doors. Except some Cherries and Plums, few of the roots of our trees had gone above an inch or two from the pots. Not only did we thus plunge to keep the trees alive, but for a month or six weeks we covered the pots altogether with litter.

There is one little matter we would like to notice here. In the orchard-house, the latest one, we had some beautiful Ribston Pippins in September, flavour pronounced to be delicious; Plums, &c., the same. Then and since we have had fine-looking Pears, but we think the look was the best of them. They were not so high-flavoured and juicy as similar kinds grown out of doors, and ripened on the shelf of the fruit-room. Such, where grown in quantity, we would half plunge out of doors in a warm sheltered place after the middle of June. What do our practical men say? We also intended taking out our fine plants of Cherries in pots, but time went on, and there they are, and we begin to think from their appearance, and as we do not mean to force them, they are just as well where they are.

ORNAMENTAL DEPARTMENT.

Proceeded with securing greenhouse plants, hardening off stove plants, giving both all the air they could stand, and as soon as possible will remove *Fuchsias*, *Begonias*, &c., from the greenhouse, and rearrange for the winter. Examine bulbs to see that mice have not attacked them. Give all the air possible to hardwooded Cape and New Holland plants, but keep them secure from drenching rains, which the state of the barometer would indicate to be not far distant. General work, as to potting, cleaning, &c., much the same as in the last two weeks. We fear the high winds will sweep off the most of our tree leaves, which are falling freely, and when they go careering off into other people's hands, it is a great loss to us, and helps to keep us back for the next season. Were it not for these leaves the flower garden would still be fine, but to keep it free of leaves now would be like washing the skin of an Ethiopian to make it white. A month or five weeks ago, we noticed some men with brooms hunting stray leaves over a lawn, getting some half a dozen to lie down friendly together to be picked up by a barrow afterwards. Long before the barrow came, the leaves would dissolve partnership, and be trying to establish a fresh resting place on their own account. Such stray leaves as these would disfigure the nice lawn, and they might have been picked up individually and put in the gatherer's pocket at once, or in an apron or bag, sooner than half a dozen could have done it by the do-and-the-undo policy. Of course, when the leaves lie thick, sweeping and heaps must be resorted to; but in the great majority of cases, the making of heaps, to come and clear them up afterwards, is a mistake.

Calceolarias.—Our chief work of the week has been prepar-

ing for and inserting a great number of *Calceolaria* cuttings, to the preparation of which we have already alluded. We put in the bottom of the pit as much dryish litter as when well trodden would be a foot or 14 inches deep, then a couple of inches of half rotten leaves, also well trodden, then an inch of leaf mould, as we thought free of worms, mixed with the riddings of the soil, then 2½ inches of sandy loam, and a quarter of an inch of drift sand on the surface. Before the sand was put on the whole was again trodden, levelled, and slightly watered, as the material was rather dry; the sand was firmly beaten down, and the planting began. This season we plant them in rows 1 inch apart, and the rows are nearly 10 inches from each other. We like little short cuttings, about 2 inches long, taken off from the older stem with a heel; but you cannot always depend on getting them all with such qualities. It requires more time to take the cuttings off, and the lads will rather prefer having more time in the shed in making, than at the bed in taking them off. All amateurs who do most of the work themselves, we advise to spend time in the selection of their cuttings. There is little time afterwards required in making them, and though longer pieces, necessarily shortened, will often do well, they require more trouble and looking after than these short stubby pieces from 2 to 2½ and 3 inches long. Cleaning the bottom, removing a leaf or two, and shortening one or two more are all that they require. When planted we water to fix them well, and for a long time a skiff from the syringe in a hot day, the glasses close, and air at night when not frosty will be all that they will require, as we would be best pleased if they rooted little until after Christmas.—R. F.

COVENT GARDEN MARKET.—OCTOBER 22.

Supplies of fruit continue heavy, with the exception of Pines, which are rather scarce, and of Peaches, which will soon be over. The principal dessert Apples are King of the Pippins, Ribston Pippins, which are very abundant, and Cox's Orange Pippin, of which there are excellent specimens to be had. Besides these there is great plenty of nameless Apples, such as are hawked about the streets. Pears for dessert purposes consist of Marie Louise, Crassane, Duchesse d'Angoulême, from the continent, and Beurré d'Anjou, a handsome new kind. The supply of Cobs is short this week, owing to holders keeping back; and vegetables are not so plentiful as they have been in former weeks. The Potato market remains unchanged.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples ½ sieve	0	0	0	0	Mulberries punnet	0	0	0	0
Apricots doz.	0	0	0	0	Nectarines doz.	0	0	0	0
Cherries lb.	0	0	0	0	Oranges 100	10	0	14	0
Currants, Red ½ sieve	0	0	0	0	Peaches doz.	4	0	12	0
Black do.	0	0	0	0	Pears (kitchen).... bush.	5	0	10	0
Figs doz.	0	0	0	0	dessert do.	1	0	3	0
Filberts & Nuts 100 lbs.	60	0	80	0	Pine Apples lb.	4	0	8	0
Cobs do.	60	0	80	0	Plums ½ sieve	2	0	7	0
Grapes, Hamburgs lb.	1	6	5	0	Pomegranates each	0	4	0	6
Muscats 3	0	7	0	0	Quinces ½ sieve	2	0	4	0
Lemons 100	8	0	14	0	Raspberries lb.	0	0	0	0
Melons each	1	6	4	0	Walnuts bush.	14	0	20	0

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes each	0	4	to	0	Horseradish ... bundle	2	6	to	5
Asparagus bundle	0	0	0	0	Leeks bunch	0	2	0	3
Beans Broad ½ sieve	0	0	0	0	Lettuce score	2	0	4	0
Kidney ½ sieve	3	8	5	0	Mushrooms pottle	1	6	2	6
Beet, Red doz.	1	0	3	0	Mustd. & Cress, punnet	0	2	0	0
Broccoli bundle	1	0	1	6	Onions bunch	0	4	0	6
Brussels Sprouts ½ sieve	2	6	3	6	pickling quart	0	8	0	8
Cabbage doz.	1	0	2	0	Parley doz. bunches	4	0	6	0
Capiscums 100	1	0	2	0	Parsnips doz.	0	9	1	8
Carrots bunch	0	5	0	8	Peas quart	0	0	0	0
Cauliflower doz.	4	0	6	0	Potatoes bushel	2	6	4	0
Celery bundle	1	0	2	0	Radiashes doz. bunches	1	0	0	0
Cucumbers each	0	6	1	0	Savoy doz.	1	0	2	6
pickling doz.	0	0	0	0	Sea-kale basket	0	0	0	0
Endive score	2	6	4	0	Spinach sieve	2	0	4	0
Fennel bunch	0	3	0	0	Tomatoes ½ sieve	2	0	4	0
Garlic and Shallots, lb.	0	8	0	0	Turnips bunch	0	3	0	6
Herbs bunch	0	8	0	0	Vegetable Marrows doz.	2	0	3	0

TRADE CATALOGUES RECEIVED.

James Veitch, Royal Exotic Nursery, King's Road, Chelsea, and Coombe Wood, Kingston Hill.—*Plant Catalogue; Catalogue of Hardy Trees, Shrubs, Conifera, American Plants, &c.; Catalogue of Select Roses.*

Charles Turner, Royal Nurseries, Slough and Salt Hill.—*Catalogue of Roses, Fruit Trees, Conifera, Hardy Trees and Shrubs, &c.; Select List of Pelargoniums.*

TO CORRESPONDENTS.

•• We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London. E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

GUAVA (*G. S.*).—We believe yours to be the *Paidium Cattleianum*. The purple fruit you enclosed was too bruised to judge of its exact shape, but the perfume and Strawberry flavour were that of the species we have named, *P. ferrugineum* we never heard of before.

FRUIT (*C. W., Boston*).—Write to Messrs. Webber & Co., Covent Garden Market.

PEAR LEAVES (*C. E. L.*).—They are attacked by a parasitical fungus. If you could collect all the affected leaves now and burn them, and do so when the fungus appears next year, you would extirpate the plague. It injures, but will not kill your trees.

MUSHROOMS (*Silas Firings*).—Sowing salt over grass land early in autumn might prevent the occurrence of Mushrooms. We do not know the Elms in the Close of Salisbury.

HENBLOW'S DICTIONARY (*Marfordale*).—You can have it free by post for fifty-two stamps. The flowers were destroyed by the post-office puncheon.

ROSEARY (*A Lover of Roses*).—It is, as you say, often spelt with an *a*, but having an English termination, we think the *e* is more correct. If the word had a Latin termination then it would be otherwise, as in *rosarium*. It is desirable also to have the spelling distinct from *rosary*, the name for the Roman Catholic string of beads.

DWARF APPLE TREES (*E. M. W.*).—Your overgrown dwarf Apple trees are doubtless grafted on the crab stock. No pruning will arrest their growth. The only method of doing so would be to take them up carefully in November, and reduce all their shoots to half their length, making their heads symmetrical. If they commence to make vigorous growth, say in 1866, they may in the autumn of that year again be taken up and replanted.

BOWLING GREEN (*G. E.*).—Our correspondent asks whether a bowling green should not rise 6 inches in the centre? We have always considered that a perfect level was the most desirable. It is so stated in *Rees's Cyclopaedia*, where there are very full directions for making a bowling green.

HEATING A CONSERVATORY (*T. E. B.*).—We have no doubt that *Mussett's* plan would answer, and that of any other tradesman who advertises in our columns. Candidly, we take with the usual drawbacks all systems of hot water that are to do so much work at so small a cost. In all the plans we have worked we never found very great difference when continuously worked. A tall, conical, or tubular boiler would suit you and so would a flue along the centre of the house. We do not know the mode of laying out your 34 by 22 feet wide house, and whether span-roofed or not; but we have no doubt that the cheapest and most economical plan for merely keeping out frost would be a brick *Arnott's* stove inside the house. (*Stanley Hall*).—Much the same answer as to the preceding. Any of those tradesmen who advertise in our columns would do the work for you, or, if preferred, any blacksmith or plumber that has been used to it in your neighbourhood. We have no preference for systems, after having seen and tried most at work, except liking the simplest best. A middle-sized saddle-back, or conical, or tubular-boiler will suit your purpose, and if your house is lofty, span-roofed and you wish to keep a temperature of from 55° to 60° in winter, you would require three pipes all round. If the house is a lean-to and you do not want so high a temperature, two pipes at the ends and front will be ample.

INARCHED VINE (*Watton*).—If you want to give due strength to the inarched Muscates you must cut away the head of the original stock. If you cannot well do this at once, take away a good portion of it, and the whole of it next year. As the Muscat shoot is so weak, cut that down to a couple of buds or so. The more strength of the stock you give it the better will it do. The flower was too faded and injured to be identified.

ARABIS LUCIDA VARIEGATA.—James Hoade, Addlestone, Surrey, wishes to know where he can obtain a supply of this plant.

EMIGRATING TO NEW ZEALAND.—"J. C." wishes to know if Strawberry plants can be packed so as to be taken out; whether tools should be taken; whether Quirk thrives there; what kinds of seed should be taken; and whether settlers there grow their own grass seed? Answers to these queries, and any other information, will be acceptable.

VINES NOT BREAKING WELL (*Vinery*).—We fear you have allowed too much fruit to remain on your Vines, which as you say are very young, and supposing you did the same last year, and then started to force early the past spring, the evil you complain of was very likely to happen. We fear we cannot give you any better advice than to cut them down below the blank caused by the buds not breaking, or even lower; but if plenty of canes exist you might let some of them remain as they are in order to produce some fruit next year. Buds that have missed breaking the past season will not break next, although most old wood is furnished with sets of embryo buds which only burst forth into leaf on being urged by some extraordinary cause—as the heading-down of the plant or other similar ordeal. We certainly caution you against allowing the Vines to bear so heavily another season.

DIRECTION (*S. B.*).—The direction is Stanley Bridge, King's Road, Chelsea.

INSECTS (*G. W. H.*).—Send us specimens in a quill or box, so that they cannot be crushed by the post-office stamps, and we will endeavour to tell you the names.

ADVICE (J. A.).—You appear to see the difficulties so thoroughly yourself as to stand in little need of advice. As to the vineries, we think it almost a pity to meddle with them; but dividing the range into three, instead of two, would enable you to have an early house next the boiler, with less consumption of fuel than you would need for a larger house. Secondly, As the range of vineries is only 64 feet, we think that taking out part of the glass in the centre, and forming a span-roof there from north to south, would involve considerable labour and expense, and do much to impair the usefulness of the vineries, and also to rear the symmetry which your employer values so much. Thirdly, On the west side of the vineries there is an open space, with a pit in front of it in line with the outside vine-border, and west of the open space is an orchard-house, and we certainly would recommend you to have a house in that open space if it were not so wide as the orchard-house. This would be much better than interfering with the general outline of the vineries, such as having a span-roof in the centre of them, as we have frequently proved that putting up a new house is often an easier and less expensive affair than cutting, changing, and altering the appearance of an old one. Fourth, This plan would give you symmetry, as the pit you now have, with the new house behind it, would form the centre, the orchard-houses the west wing, and the vineries the east wing. Fifth, If you choose to increase your houses eastward, we do not see that, though the ground and the wall drop there, the new houses, being on a different level, would do away with symmetry. If so disposed on this lower level, making the vineries the centre, you might have the pit and house behind it, and an orchard-house as on the west side. Sixth, We question if you will heat much cheaper by one boiler, unless you choose to alter the position of the boiler—that is, on the supposition that you do not go farther eastward, and also on the supposition that the new house, pit, and vineries, are on a similar level. If so, if the late vinery were changed into an early one, you could easily heat it and the pit from a boiler placed at the back of the vinery, and without heating any other part, unless you liked. If the piping in the pit is on a much lower level, then, but for the unattractiveness of the present stoakehole in the path, that would be the best place for your one boiler. But, seventhly, If you contemplate having a house or a pit at the east end of a vinery, and perhaps a house without heat farther east still, then it would be desirable to have the houses needing most heat at that end, and to place your boiler at the lowest part; and the simplest plan then would be to take a flow and return from the boiler to the farthest point you wished to heat, and then take flow and return from these to every house you wished to heat separately. By this means you would always have a little heat from the pipes in all the houses, but the flow and return need not be more than 3 inches, and when you did not want the heat you could give a little more air. This would be the simplest plan. If you increased the number of houses, however, you would require to have two boilers near together, in case you should have an accident with one. With eight or nine places it is a risk to depend entirely on one boiler. For such work we would prefer upright tubular or conical boilers. The lowering of the top lights of the vinery, and making a hip instead, would so far lessen the length of the rafters. We see no advantage in doing so. We do not see how you could have the lights now at top, for what would you form the hip with? Surely not with an opaque hip—that would be worse still. We are obliged by your experience of Cloth of Gold. It has varied much this season. Perhaps Golden Chain has never done better than this year.

THORN HEDGES THIN AT THE BOTTOM (A Five-years Subscriber).—If they are too thin for a fence to prevent the intrusion of cattle, and you can dispense with them as such for a year or two, you may cut them down to 1 foot from the ground, and this any time from that at which the quicks are leafless to the middle of March, but the earlier the better. If the fences cannot be dispensed with for a year or two it would be preferable to lay the Thorns, cutting each stem 9 inches from the ground about three-parts through, and bringing the top down in an oblique direction, so that a fence 2 feet 6 inches or 3 feet high may be formed, crossing the smaller branches, so as to secure them in the position in which they are placed. In this way the hedge will become close at the bottom by the production of shoots below the cut part; but if the top be taken clean off a much better fence will be the result. There is no fear of frost injuring the quicks if they be cut in autumn.

MOVING COMMON HARDY FERNS (Rusticus).—If it be the common Bracken (*Pteris aquilina*), it is rather difficult of transplantation. To succeed at all with it select that which is growing the least, and dig it up in patches now, or from this time up to the appearance of young growths in spring, going so deep as to secure the underground creeping stems, taking up with the earth entire about them, and planting in the places desired. All other kinds of common Ferns may be taken up now with a ball of earth to them, or it may be deferred until March. If care be taken not to stab them up, but to preserve a nice ball to each plant, they will move safely and make quite a show in the first year, especially if they be planted in a little leaf mould, and have a good watering after planting if the weather be dry. If planted now they will not require watering.

HOYA CARNOSA CULTURE—PRUNING CLIMBING ROSES (Hoyes).—The Hoya does well in a compost of turfy light loam, leaf mould, and peat, in equal parts, with about one-sixth of broken potsherds, or pieces of charcoal the size of a Walnut, added, using besides a like proportion of silver or other sharp sand. The drainage should be perfect, and occupy at least one-third the depth of the pot. It requires but little water in winter, and at other times about half the quantity given to ordinary greenhouse plants, as Fuchsias, &c. If an ornamental-follied climber is wanted, there is nothing handsomer than the well-known *Cissus discolor*, and it likes a little shade; but if there is no shade from plants overhead, *Ficus* *Decaisneana*, or *Stephanotis floribunda*, are quick-growing and fine climbers. Your management of the climbing Roses is quite right, and we cannot improve on your practice, except it be that if the old shoots are worn out they would be better displaced by younger shoots. In that case the strong shoots springing from the base of the tree should be allowed to grow trained in to the wall, and the old shoots cut away to make room for them, and eventually entirely removed. Our "Garden Manual" contains directions for the cultivation of the plants named, and may be had from our office free by post for twenty stamps.

PEACHES (Persica).—For late varieties procure Walburton Admirable and Gregory's Late. We believe that Mr. Osborne, nurseryman, Fulham, has East's Thames Bank Peach.

TESTONIA AUREA IN A POT DONE BLOOMING (J. L.).—Pot it now, and cut down the foliage to the surface when it decays. Keep dry, but not just dry, during the winter, and shelter in a pit or cold greenhouse, from which frost is barely excluded.

SEEDLING PANSY (An Old Subscriber).—It is quite equal to many other varieties, but far inferior to the best now in our florists' lists.

MOVING HOLLIES—PLANTS UNDER YEW TREES (N.).—Hollies which have not been transplanted frequently will not move safely at any season, and we fear a worse time could not be selected than the present. Wet showery weather in April and May is the most suitable time. We know of no tree or plants that will grow under the shade of a Yew tree, except the different varieties of Vinca or Periwinkle, both green and variegated.

CONSTRUCTING A VINEY (A Novice).—You had better have the back wall 18 or 20 feet in height, as the front is 24 feet. On that space of ground, 50 feet wide and 160 feet long, you could have about four houses, or five, according to the height. Thus supposing the first at the north end to be 18 feet in height, 20 feet in front of that you might have one 14 or 15 feet in height at back, and as you decrease the height you lessen the shade from the one in front. Your best plan is to erect poles of the proposed height of back and front, with a diagonal line representing the glass between them, and place these in a line from north to south, and see how the one does shade or not the slopes or glass of the house behind it. We could calculate this very nicely for you, and at much trouble might show how the house would be influenced by the shade in the different months of the year, but the sticks will show you all you want, and it is part of our system not to do for our friends what they can better do for themselves. Be assured that what the nurseryman told you is all nonsense. Of course, it is not to be understood that you are to force the Vines the first season; but the glass will warm the soil as well as the atmosphere, and provided you give enough of air, plant with the glass on by all means, as it will help not only to give you better growth, but to ripen that growth sufficiently.

CLARKE'S GAS AND HOT-WATER APPARATUS (Yorkshire).—The manufacturer is Mr. T. C. Clarke, Eagle Iron Foundry, 25, Seel Street, Liverpool.

DWARF PLUM TREES (An Amateur Horticulturist).—Plum trees may be grown successfully as bushes; but as no dwarfing stock like the quince for the Pear, or the paradise apple for the Apple, has been discovered for Plums, they are apt to grow too vigorously, even when their young shoots are pinched in to three or four leaves all the summer. This may, however, be remedied by taking up the trees biennially in November and replanting them. The central branches of your Apple trees may be shortened to half their length without injuring the trees. No injury can result from rain to the cut surfaces. The month of February is, on the whole, the best month for winter pruning fruit trees.

PLANTING VINE FROM A POT (B. T. E.).—The Vine turned out from a pot into a "curate's vinery" will do very well, but it depends upon the growth it has made this season whether it will produce a crop next year.

BUDDED ROSES (J. P., Ellington).—Remove the bandages. Early in next spring cut off the shoot at two joints above the inserted bud, and when the shoot from this bud is about 4 inches long stop it. During May the two joints of the stock shoot may be pruned off close to the inserted bud.

BOOK (Read. J. M. F.).—McIntosh's "Greenhouse, Hothouse, and Stove" may suit you, but we believe the "Cottage Gardeners' Dictionary" is more easy for reference.

NAMES OF FRUIT (J. J. T.).—*Pears*.—1, Uvedale's St. Germain; 4, No Plus Meuris; 5, Beurré d'Arenberg; 6, Beurré de Rance; 7, Beurré d'Arenberg; 8, Beurré de Caplaumont; 9, Easter Beurré; 10, Swan's Egg. *Apples*.—2, Warner's King; 3, Dutch Codlin; 4, Ribston Pippin; 5, Rotten; 6, Golden Winter Pearmain; 7, 8, and 9, Ribston Pippin; 10, Lewis's Incomparable; 13, Dutch Codlin; 16, Herefordshire Pearmain; 18, Lincolnshire Reinette; 19, Yorkshire Greening; 33, White Costin. Others not recognised. It is really unconscionable to send so many. (*M. H. J.*).—2, Fearn's Pippin; 3, Trumpington; 5, Devonshire Quarrendon; 6, Manks Codlin; 7, Yellow Ingestrie; 11, Golden Harvey; 14, Passe Colmar; 15, Doyenné Boussoch; 16, Beal Vaet; 18, Brown Beurré; 19, Rotten; 20, Belle Après Noël; 22, Forelle; 23, Beurré Diel; 24, Bergamotte Cadette. Others not recognised. (*C. R.*).—1, Beurré Diel; 2, Beurré de Rance; 3, Duchesse d'Angoulême. (*Old Subscriber*).—3, Haddon's Incomparable; 4, Beurré Diel; 5, No Plus Meuris; 7, Beurré de Rance; 8, Suffolk Thorn; 9, Gendeshelm; 11, Emperor Alexander; 12, Api Rose; 13, Golden Nonpareil; 14, Franklin's Golden Pippin; 15, Golden Knob; 16, Tower of Glammis; 17, Gloria Mundi; 18, Dumelow's Seedling; 19, Borovitski. Others not recognised. The specimens were very fine. (*G. H.*).—1, Chaumontel; 2, Flemish Beauty; 3, Chaumontel; 4, Beurré de Rance; 5, Beurré d'Arenberg; 7, No Plus Meuris; 8, Beurré Diel. (*W. G.*).—2, Adams's Pearmain; 4, Golden Reinette; 5, Gravenstein; 8, Wyken Pippin; 11, Hughes' Golden Pippin; 13, Fearn's Pippin; 14, Reinette du Canada. The Pear is Doyenné Blanc. Others not recognised. (*W. O. E.*).—1, Trebbiano; 2, Prolific Sweetwater. The first requires more heat than the Black Hamburg.

NAMES OF PLANTS (A Nairnshire Subscriber).—It is *Stenocarpus Cunninghamii*. Its flowers are most beautiful, in candelabrum-like umbels, clothed with most vivid orange scarlet down. It does not bloom until it has attained a height of 15 or more feet; requires a greenhouse and abundance of light; is evergreen, and a native of Moreton Bay. (*Constant Reader*).—Your lemon-scented plant is *Dictamnus fraxinella*. (*Stockport*).—1, *Hieracium crocatum*; 2, *Jasione montana*; 3, Too young to be named; 4, *Thrinia birta* (*R. H.*).—1, *Sericographa Ghibcebrigitana*; 2, Cannot be named as sent; 3, *Daedalanthus nervosus*; 4, *Peristrophe speciosa*. (*A. L. Melville*).—*Agapanthus umbellatus*, var. *foliis variegatis*, sometimes called *Agapanthus variegatus* in gardens.

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

POULTRY SHOWS IN THE SOUTH.

WE recollect the building of the Burlington Arcade. As it approached completion there were crowds at each end, and among them men of all callings, admiring and condemning, as the case might be. A butcher heard all that was said, and at once declared it was fit for one thing only—it would make a first-rate butchers' market. He saw it only as connected with his trade. We are apt to view all

places, when on our poultry-hobby, with an eye to their fitness for runs or shows.

We cannot tell the reason, but shows do not prosper in the south or south-west. During the winter the north has its weekly shows, which are well supported. They increase yearly; but in the south, and even in the south-west, they die a natural death. They had no lack of support; but, we believe, they were a sort of poultry "Do-as-you-likes" of the first category (see Kingsley's "Water-babies"), and so they went out, and, like them, have disappeared. People left off poultry in those parts, and descended to horses and dogs. Extremes meet; and so we suppose, as there are none now, they will be numerous by-and-by. We must wait, but, like Sancho's island, they are a long time coming. It is strange how people differ, and how supine the Anglo-Saxon, so enterprising in some things, is in others. He will compass the elements and surpass the labours of Hercules to do some great thing, but little things slip quietly by, and are unnoticed. Were it not that a certain per-centage of mankind is born fond of everything that breathes, and must find an outlet for a gushing sympathy for animal life, we do not think Englishmen would care for any fowl but a Game cock; nor do they care for breeding the lower order of quadrupeds, except as pets, or fancy things. In that little hive of a country, Belgium, Rabbits are reared as an article of food. In the suburbs of the towns, and in the towns themselves, there is no such thing as a stray or wasted cabbage-leaf or bad potato. The Rabbit-keepers collect all, and the result, as shown by recent statistics, is that 80,000 Rabbits, weighing above 200,000 lbs. of delicate food, are sometimes consumed in a week. This is a notable amount, and, calculated for the year, gives large figures. All pains are taken to increase the size of these Rabbits; and the garden of one of the breeders of them shows every cabbage plant trimmed up like the elms in the hedges of some counties. It also shows a goodly heap of manure, the return for the waste vegetables consumed by the Rabbits.

The same care and painstaking presides over the poultry management. Every fowl is selected according to its fitness for the place where it is to live, and for the purposes to which it is applied. Being a Catholic country, there is a great demand for eggs. This, added to the fact that much of the soil is unfitted for rearing chickens, causes many of the non-sitters to be kept.

Attention to such details would enable many to have a paying hobby, would provide many a delicate Sunday dinner, and would add to the food produced in the country.

As a great lover of poultry, and a constant reader of your *Journal*, I feel surprised at your remarks on the Tunbridge Wells Poultry Show. I allude to the barn-door fowl, that "abomination of all abominations." This neighbourhood (I mean within a circle of ten or fifteen miles) is a great poultry county, and, I believe, sends more fowls to the London market than any other part of Sussex. From our railway station alone, some thousands are sent every week, and there is often a sum of £600 sent in one week from the Newgate and Leadenhall salesmen to pay for the fowls collected by one van. Of course, these fowls are bred in the neighbourhood, and yet not one farmer or cottager in a hundred keeps a pure-bred fowl. Some breeders say the more breeds are mixed the better and the hardier the chickens are. I have walked ten miles out and home in the earlier part of my "poultry mania," to see a place where only Spanish were kept. Pure-bred Dorkings are better known, and I have been pleased to see of late a growing liking for them amongst those who breed for profit only. As for Brahmas, I look back with regret to the hours I have wasted in explaining to friends and poultry breeders what a Brahma fowl is. In fact, I finally gave up the breed in despair of ever meeting with any sympathy in this neighbourhood. There were two or three pens at Brighton Show last year, but no class for them, I believe, although I see there is to be one this year. I consider the scarcity of Polands and Spanish at the Tunbridge Wells Show is chiefly owing to the Show being but little known, as this is only its second year; also, the difficulty in reaching it from any point south of Tunbridge Wells. There are now many breeders of Spanish and other non-sitters near Brighton, and between

there and Hastings, who have no show within easy access, except the one at Brighton.

Your correspondent, Mr. B. P. Brent, would sweep all the beautiful varieties of Hamburgs into one class, with the euphonious title of everlasting layers, while with (no doubt his favourite fowl) Dorkings he would have no less than five classes, even dividing Silver Grey, Cuckoo, and Speckled. I agree with him that Dorkings must have the greatest number of classes in order to make southern shows a success; but the chief reason why there are not more of the non-sitters kept in the south, is the fact of hundreds of thousands of eggs being weekly, nay, almost daily received in the southern ports from the coast of France. These being sold very cheap, are, of course, disseminated in all the large towns in the south, and so quickly are they now brought over by steamers, that they are commonly sold in our watering places as "new laid." Until we cultivate and encourage the breed of "everlasting layers" more, I fear we shall not be able to compete with the French for eggs, if we do for chickens.—A THOROUGH-BRED SPANISH, *Uckfield, Sussex, October 19th, 1884.*

I AM glad to see that the comparative dearth of poultry shows in the south, which I lately noticed, is attracting the attention of your correspondents. I should like very much to hear any suggestion from "Y. B. A. Z.," whose letters I always read with pleasure.

One of your correspondents last week alluded to the absence of Brahmas from the Show at Tunbridge Wells. If the authorities there and at Maidstone would only give Brahma breeders a chance of knowing when their Shows were to come off by an advertisement in your columns, I feel confident, from the experience of other Shows, that they would have a goodly muster of Brahmas. The popularity of the breed is by no means confined to the great towns of the north, for at Islington, of the eighteen exhibitors who showed Brahmas, fourteen belonged to the southern half of the kingdom.

Mr. Brent's suggestion that the Dorkings should be subdivided, and the number of Hamburg classes diminished, seems justifiable from the experience of recent Shows; but the same test proves that in popularity the Brahmas are surpassed only by the Dorkings, and when the relative encouragement given to the two breeds at many Shows is taken into account, it is found that the Brahmas stand second to none. Spanish fowl certainly do not seem to be growing in favour; nor can I think that many, if any, poultry exhibitors desire with Mr. Brent the subdivision of the Spanish into Black, White, and Blue. The people at Dorking last year held a Show at which no fowls were admissible except Dorkings; but I cannot conceive that such complete subservience to the *genius loci* is deserving of imitation at other Shows.—BRAHMA POOTRA.

FROME POULTRY SHOW.

THIS was an exhibition of poultry held in connection with the Frome Agricultural Association in the private grounds of John Sinkins, Esq., close to the railway station, and though not large, contained some very good specimens. We hear that it is the intention of the managers to offer a more extended and attractive prize list next year; and we are quite sure they will meet with the success they deserve in so doing, for nothing could exceed their anxiety to please both exhibitors and the public. This was evident in all the arrangements; and especial credit is due to Mr. Charles Harding, the indefatigable Hon. Secretary.

The day was fine on the whole, and the numerous visitors must have helped to swell the archer, which offers promise of greater liberality and success on a future occasion.

DORKINGS (Any colour).—First, Mr. S. Lang, Redland, Bristol. Second, E. Baily, Calne. Commended, R. Elling, Sutton Parva.

SPANISH (Any colour).—First, A. Heath, Calne. Second, R. Elling. COCHINS (Any colour).—First, Miss J. Milward, Newton St. Loe. Second, J. Gardener, Bristol.

HAMBURG (Pencilled, any variety).—First, G. Bendall, Walkbridge. Second, Rev. C. W. Edgell, Styles Hill House. Highly Commended, G. Bendall.

GAME (Any variety).—First, E. Elling, Sutton Parva. Second, Miss A. Elling, Sutton Parva. Commended, H. B. Festing, Maiden Bradley.

ANY OTHER DISTINCT BREED.—First, T. P. Edwards, Lyndhurst, Hants.

(White-crested Polands). Second, J. Hinton, Hinton, near Bath (Brahmas). Highly Commended, J. Hinton (Brahmas). Commended, W. Miller, Shepperton (Silver-spangled Hamburgs).

Ducks (Any variety).—First, E. Posting, Whitley (Rouens). Second, Marchioness of Bath, Longleat (Black East Indian). Highly Commended, E. Posting, Whitley (Rouens). Commended Capt. Edgell, Read (White Gull). Commended, Marquis of Bath, Longleat (Aylesbury); T. Smith, Westbury (Rouens).

Geese.—First, Marquis of Bath, Longleat. Second, E. Jeffry, Rye Hill. Commended, Miss K. Ashby, Shepperton Farm.

Turkeys.—First, Miss J. Milward, Newton St. Loe. Second, T. Ashby, jun., Haslett Hill Farm. Commended, Marchioness of Bath, Longleat.

EXTRA PRIZE.—Highly Commended, Capt. Ludlow, Heywood, Westbury (Chinese Silks).

The Judge was Charles Ballance, Esq., of Taunton, Somerset, and the awards, we are told, gave entire satisfaction.

MONMOUTH FARMERS' CLUB POULTRY SHOW.

THIS was held on the 12th inst. Mr. R. H. Nicholas, of Malpas, a well-known and successful poultry exhibitor, consented to act as Judge.

SPANISH (Any age).—First, E. Shaw, Oswestry. Second, J. Pearce, Wychem.

DORKINGS (Coloured).—First and Second, J. Skinner, Maindee. Highly Commended, E. Shaw, Oswestry. Commended, Miss A. Jones, Priory.

COCHIN-CHINA (Any variety).—First, Mrs. E. Everett, Gibraltar Cottage (White). Second, E. Jones, Newport. Commended, Mrs. E. Everett (Black).

HAMBURGERS (Gold or Silver-spangled).—First, T. Davies, Belmont Cottage, Newport (Silver). Second and Highly Commended, J. Skinner, Maindee (Silver-edged and Silver).

HAMBURGERS (Gold and Silver-pencilled).—First, J. Skinner (Silver). Second, J. F. Clifford-Burke, Llancillo (Gold).

POLANDS (Any variety).—First and Second, J. Skinner, Maindee (Golden).

GAME (Any age).—First, T. Davies, Newport. Second and Highly Commended, G. Pritchard, Llanvihangel.

ANY OTHER VARIETY NOT BEFORE MENTIONED (Any age).—First and Second, T. Davies, Newport (Minores).

BANTAMS (Any variety).—First, T. Davies, Newport (Black). Second, Miss G. Everett, Gibraltar Cottage (Silver-laced). Third, Mrs. E. Everett, Gibraltar Cottage (Game). Highly Commended, T. Davies (Black).

TURKEYS (Any age).—First, E. Bullock, Hadnock. Second, W. James, Lydart. Highly Commended, W. Williams, Pilsonga. Commended, Mrs. E. Everett (White).

GESE.—First, R. Rees, Abergavenny. Second, Miss A. Jones, Priory (White). Highly Commended, Miss A. Jones; R. Rees.

DUCKS (Aylesbury).—First, R. Rees. Second, J. Skinner. Highly Commended, E. Shaw, Oswestry.

DUCKS (Rouen).—First, J. Skinner. Second, I. Theyer, Walford Court. Highly Commended, J. White, St. Leonards. Commended, Mrs. Elliott, Treire.

GUINIA FOWLS.—Prize, W. Phillips, Treasures.

ISLINGTON POULTRY SHOW.

DEVOUTLY do I respond to the first part of your note to my remarks that we may meet at some future Islington Show, but I fear there is no such luck. I must simply dream of the many wrinkles I might learn from an hour's stroll amongst our pets in such company, and hope on. In my remarks I did not mean to say that I considered the schedule perfection. We ought not to forget that Islington is young, very young, but its growth has been very rapid, and in some respects she has set an example to her elders—in Brahmas, for instance. I do not think that Silver-Grey and White Dorkings at a Show of that calibre should compete in the same class; but you yourself have, I think, in by-gone Numbers, especially, if my recollection serves me, in your remarks on Birmingham in 1863, said that you saw no necessity for Silver-Greys having a class to themselves. However, I myself should not object to their having three classes; but am disposed to think that even in the southern counties five classes, as suggested by Mr. B. P. Brent, would in many cases form sorry exhibitions. Is your talented correspondent quite correct in writing as if the Dorking were peculiarly a southern-county bird? My skimmings of prize lists would induce me to say that the prizes very often go northwards—not infrequently out of England—to wit, Mrs. F. Blair, Mr. J. Anderson, and others. It has always seemed to me but right that the Committee of really grand Shows should make up their minds to a loss on many classes, in order that they may obtain a variety—a collection, in fact—of the various breeds of poultry. Less Shows, such, in fact, as are held northwards, are usually tacked on to agricultural exhibitions, and generally prove the most attractive portion. This is their right place, and they generally succeed; but we southerners miss the manufacturing population, who

take the show-day as their holiday, who pay their shilling willingly, and whose payments fill the coffers of the Association, and make the speculation successful. Take Lord Tredegar's Show as an example even in the southern counties. I recollect the infancy of the poultry department—four pens of Cochins, shown by some gentleman at Chepstow; this was about twelve years ago. They created great excitement; there was no prize offered for them. The following year some prizes were offered, and some thirty or forty pens exhibited. These numbers gradually increased, although it was necessarily a local Show, as the Committee did not undertake the charge of the fowls. Well, what has it grown to now? A two-days show, with three or four hundred entries, and exhibitors from all parts of the country, many of our best breeders exhibiting. But here, as in the north, "the hills" furnish a large manufacturing population, and the speculation is, I imagine, a success: at any rate, the classes are yearly increased.

To Mr. B. P. Brent's further suggestion, that Spanish should have Black, White, and Blue classes, I say, Yes, by all means, when, like the Brahmas, they have fought the same upright fight, and proved that they will support such classes; but the experience of Islington seems rather against any increase of classes. Why, in the "pair of pullets" class, there were four entries only, and the second prize then withheld!

There are additions which I hope Islington will recollect—certainly a class for Malays, even though it be necessary, as our friend "WILKINS RECTOR" says, to hide them that those only interested in the "uglies" may see them. I think I could show him some that would make him alter his ideas. Poland, any variety, is another mistake, certainly; but it must be borne in mind that it has been brought about by the supineness of Poland fanciers. Until they come forward more I could not advise a division into more than "White-crested Black" and "Silver and Gold."

Again: with great advantage to all parties, Geese and Turkeys might there be exhibited in pairs. Mr. G. W. Ranwell, certainly, has great cause for complaint; but if "prizes were thickly distributed to the members," there was one very glaring instance in the second-prize pen of Brahmas of a member not getting his deserts.

I have myself nothing to do with the Poultry Club—nay, as your columns prove, I have written against book-judging: therefore I am rather against the Club than for it; but if by their influence they can get up such a prize schedule and such a Show as Islington seems to have been, then I say we southern counties ought to be grateful to them.—Y. B. A. Z.

HACKLE OF SILVER-PENCILLED HAMBURGHS —ROUEN DUCK'S LEGS.

I SHALL feel obliged by your informing me if there are any printed rules or book of the requisites for exhibiting poultry besides "Bailly on Fowls," as I was yesterday at the Worcester Poultry Show, and saw the first prize given to Silver-pencilled Hamburgs, one hen having spotted hackles, and in another case a Rouen Duck with yellow feet, like a drake. I always considered, and Bailly and all other books state, that the Silver Hamburg hackles must be pure white, and the Rouen Duck's feet black. I really shall feel obliged by knowing what are the rules and how to be obtained, as it seems hard on exhibitors if it is left to the whim or fancy of the Judge.—L. J. GILBY.

[Very rarely do we ask of a Judge a reason for his decisions, and when we forwarded Mr. Gilby's letter to Mr. Hewitt we told the latter gentleman we did not do so for the sake of enabling him to defend his awards, but to have his opinion about the hackle and the legs. His reply, however, enters fully into all the topics, and with his permission we publish it.]

"I beg at once to assure your correspondent I was at the time of making the awards at Worcester quite as cognizant of the 'spotted hackle' in one of the Silver-pencilled hens as he himself was, and at the time regretted it; though I believe in the hands of a less scrupulous owner she would have been so 'improved' before sending out that she might have passed muster without any one observing it. I am perfectly aware that it was a failing; but there are many

other points equally important to success as the hackle in the Silver-pencilled Hamburgs, all which have equally strong claims on the attention of an arbitrator.

"I myself very rarely expect to find positive perfection even in a first-prize pen of birds if comprising three specimens. The awards, it should always be borne in mind, are made rather to the least defective than as an arbitrator's guarantee of absolute faultlessness.

"As to the statement that a Rouen Duck's feet should be black, I never before heard it propounded as indispensable or a desideratum. The true type of the Rouen Duck, of either sex, is admitted to be the Mallard and Wild Duck; size only always excepted. I myself never saw a Wild Duck nor yet a purely-bred Rouen with black feet. At first, as young ducklings, both breeds have dusky legs and feet, but on the attainment of the second feather they always assume a colour very closely resembling that of a Seville orange, sooty on the webs; and this hue they afterwards retain for life, subject, as in all birds, whether aquatic or otherwise, to becoming much lighter coloured during moulting time, and after long laying. Again: the intensity of colour in all waterfowls' legs and feet is greatly dependant on whether they enjoy free access to water, or the contrary. No adult purely-bred Wild Duck has black feet, nor am I aware of any domesticated variety of Duck with black legs and feet, except the East Indian, though several of the smaller wild waterfowls are very closely approaching to it; but not so the true Wild Duck.

"Your correspondent has a considerable variety of books on poultry to choose from. The original 'Poultry Book' is expensive; then comes 'Dixon on Poultry,' and 'Nolan on Poultry,' and a very cheap little work named 'Poultry Book for the Many,' published at your office, and any of the others can be obtained through a general bookseller.—EDWARD HEWITT."

COWS ROBBED OF THEIR MILK.

In reply to your correspondent "J. J. T." and your answer to his query, I beg your insertion of the following fact. About eight years since I had a cow who somewhat suddenly ceased to give more than the smallest quantity of milk. After nights and days of watching, we found she was regularly milked by two strong pigs, whose wonderful condition at the time was a mystery to us. I do not know anything about hedgehogs milking cows, and never heard of such a thing.—TRENT.

UNITING QUEENS TO STOCKS—UNITING BEES.

I HAVE much pleasure in submitting to the apiarian readers of THE JOURNAL OF HORTICULTURE the following letter from the esteemed correspondent whose failure with a Ligurian queen was related in page 225, and to whom I sent a second queen in place of the one which met so untimely an end.—A DEVONSHIRE BEE-KEEPER.

"DEAR SIR,—I am glad to say that the queen and bees arrived quite safely at Albrighton yesterday (October 10), at 3.27, and also that I successfully united them to the stock which had been previously prepared for their reception.

"When the box arrived I noticed that it smelt strongly of what seemed to me to be heather honey, and I feared that the peculiar smell might render the strangers obnoxious or distinguishable to my bees. So having removed the lid I substituted a piece of perforated zinc, and after bringing the queenless stock into the house inverted the small box over the aperture in the crown-board, and allowed them to remain in this position all night. In the morning I placed the Italian queen with two only of her own subjects under a small bell-glass, and admitted one bee from the stock. It appeared not to take much notice of the queen, but having just touched her a little with its antennae, left her alone. A second bee was then admitted, which, marching up to her majesty, at once seized her by the root of the wing. I instantly interfered, and crushed the hostile bee, still adhering tenaciously to the queen. I then thought I would try the effect of peppermint-scented syrup; and having taken the hive to its accustomed stand, blew a few whiffs of tobacco smoke underneath the crown-board, and sprinkled the bees bountifully with the scented syrup, and, replacing the crown-

board, allowed them ten minutes to lick up the syrup and settle themselves. At first I thought of sprinkling the Italians also with the syrup, and then slowly admitting the bees from the stock to the queen and bees altogether; but on consideration, thinking it would then be difficult to see what the disposition of my bees might be towards the person of the queen, I determined to make a second attempt as before. The result was most satisfactory. The bees at once acknowledged the queen (whom I also had daubed with scented syrup), so that in about one hour I felt justified in allowing the queen to descend into the hive. Subsequently I sprinkled the Italian workers, and allowed them to enter at the doorway of the hive. No fighting ensued, but a perfectly harmonious union was effected. I have just united the discarded hybrid queen to a stock of black bees. Had the second bee used its sting instead of its teeth a repetition of the previous tragedy would have occurred.

"I think sprinkling bees with scented syrup is a good preparation both for uniting queens and bees to strange stocks, and for this mode of proceeding I am indebted entirely to you. I have effected many unions with bees in this way with invariable success, no fighting taking place in the hive; but a little (not much), has sometimes occurred on the following day, owing to the hesitation with which the strangers alight at the entrance. If adjoining hives are united, and the conjoined bees are placed between the original sites, both being equally puzzled, fighting has not ensued.—J. E. B."

VARIATION IN LIGURIAN BEES.

I HAVE a hive of Ligurian bees, the queen of which is breeding differently-coloured workers. Some of them are brilliantly marked, while others are quite dark, the orange-coloured stripes being scarcely visible. Will you tell me whether this is a common occurrence, or the result of a cross with a black drone?—A. N. B.

[The queen of your Ligurian stock has been hybridised by a black drone, which is no very unusual occurrence. You have yourself accurately described the mongrel breed, which results from the cross between the two varieties.]

BEES CARNIVOROUS.

"I AM very jealous," Dr. Cumming observes, "for my bees;" and so am I, sir, and I don't relish the idea of their being flesh-eaters, any more than that of my honey having been brought home in the same "sac" with horse beef. Alas! for our old-fashioned notions; how they go one after another, as the world grows wiser! Why, I should have fancied, sir, that the turkey drum-stick which "RUR" saw inside a hive covered with bees, was undergoing the process of mandible-scraping as a sanitary precaution; or that it might be destined, like the "Bee-master's" snail, to receive propolitan sepulture.

Before I saw the article on this subject in your Journal, I would as soon have believed in a hybrid between a wasp and a bee, as in the carnivorous propensities of the latter. I wonder, by-the-by, whether "RUR's" bees had any peculiarity either in the cut or colour of their coats, which would at all countenance the notion that there might be a dash of vespan taint in that hive. Since reading the article alluded to, I have tried my own bees with flesh, and some that were hungry, too, but they turned away from it with disgust. I took care to have it dressed with the "gravy in," and no salt, but they recoiled from it, with, as I thought, surprise and annoyance. Mutton, beef, rabbit, hare, it matters not, they will not even touch it. One or two old fellows made a rush at it, at first, and after giving it a few raps with their antennae, turned round and eyed me full in the face, as if in contemplation of an "odd fish," for which I suspect they took me for my pains. However, if they do not know the value of "fibrin" in imparting strength to the constitution, I mean to teach them, and I mean, sir, to adopt this system, at least, I offer it as a suggestion, subject to your approval. I shall make some strong beef tea, thickened with calves' feet jelly, and flavoured with "Scotch ale."

The idea of a patent food for bees has crossed my mind

once or twice, and if I had or could obtain a great name and high sanction, perhaps I might make a venture which would raise my humble blush to a par with Thorley or De Jongh. By-the-by, I wonder what became of the propolitan mausoleum in which Dr. Cumming's snail was interred, what kind of snail it was, and what it did during the somewhat slow process of living sepulture? Truly it must have been a snail of wonderful patience, and the bees must have worked even with more than apian alacrity.—RUBY BLUSH.

FOUL BROOD.

In again taking notice of foul brood, let it be distinctly understood that it is not for the purpose of resuming a discussion on it, but simply to state what I have observed since my last communication. Let others do the same, and then we may hope to find out its cause and cure. I trust that what I have to say, though it partly relates to what I have seen in my neighbour's apiary, will not be deemed the less interesting on that account.

1st. When the bees arrived from the heather last autumn and it was found that all his hives contained foul brood more or less, he drove the bees out of three hives (uniting them at the same time), cut out all the combs, except in the three hives, and carefully selecting all those which had no foul brood, put them in a clean straw top or super. He supported them with sticks, and placed the super on the top of an eke of empty combs, but containing a good swarm of bees which I had given him, and which had been always free from foul brood. In the spring of this year when we examined it there was a considerable quantity of foul brood both in the super and eke. We also observed a few drone cells diseased. This was the first occasion on which we had ever observed drone brood affected. We then drove all the bees into a clean empty hive, which was taken to the heather with the others.

2nd. The three united swarms alluded to he kept for ten days in an empty hive, and then put them into a hive of empty combs which I gave him, but quite free from disease. The two when examined in the spring after the bees had swarmed and all the young brood was out, were found to contain a quantity of foul brood. The bees were driven into a clean empty hive, as in the former case, and sent to the hills. Since they came from the heather they have been examined as well as his other hives, nine in all, and I am glad to state that not a single foul-brood cell has been seen in any of them. This is the more remarkable, as his hives had it more or less every year for ten or fourteen years. Those bees were fed with honey from diseased combs.

I have now to report what has occurred among my own hives. It will be remembered that last year foul brood made its appearance for the first time in one of my hives, a Neighbour's, and when seen it was at once destroyed, bees and everything. The disease again made its appearance in three of my hives this spring, but in none of the others, and, strange to say, it was in those bars I had taken out of the hive which contained the queen I had received from Mr. Woodbury last summer. The bars were taken out and put into hives containing black bees for the purpose of raising Ligurian queens. One of the bars had fifteen cells on each side diseased, the others not so many. I removed the bars at once, but allowed the bees to take the honey they contained on the outside of the hive. I have examined every bar I possess since they returned from the heather, but could not find a single diseased cell in the whole stock.

Could it be the queen I had from Mr. Woodbury that had brought foul brood all the way from Exeter, and so polluted my apiary? or is it some weakness or defect in the stocks wherein it appeared? But why speculate? I confess its cause is still as mysterious to me as ever.

In my neighbour's two cases one had clean bees put among combs taken from where the disease was, though those combs were free of foul brood, and it was even carried down to the eke of clean combs. In the other case the bees though taken from among foul combs had been kept in a clean empty hive for ten days, then put among clean combs, and were still diseased. In my own case could a single queen bee be the means of conveying this disease? Who can say? To ascertain what effect a sudden reduction of temperature

would have on a hive full of young brood, from a common cottage-hive containing a good swarm, and the bees lying out as if about to swarm, I drove out all the bees, caught the queen, put her back among the combs along with a few bees, certainly not more than five hundred, placed them about 40 yards from their old stance, and put in a bar of eggs from a Ligurian queen among the driven bees, placing it on the old stance that they might rear another queen. I had left so few bees along with the queen and young brood that for ten days seldom a bee was to be seen issuing from the hive, and though I gave them food they did not take it for ten days or more. While the hive was in this state I had a delicate thermometer made with a long bulb, and the tube 6 inches in length beneath the scale, and inserted the tube between two combs in the centre of the hive, 6 inches down. It happened at the time that the weather was extremely cold for the season, the external temperature being as low as 48° at night, while the thermometer inside the hive indicated 63°, seldom rising above 75° for fourteen days. I certainly expected nothing else but a mass of corruption, but after two weeks the bees began to go out and in, and had wonderfully recovered before they were sent to the hills; so much so that I put on a super, but previous to doing so I turned the hive up, and found that all the brood had been hatched. I could see no foul brood. When the hive came from the hills I took off the super containing 15 lbs. of honeycomb, having made 19 lbs. in all while at the heather. The hive is still free from foul brood.

In February of this year, I had thermometers, the same as the one above, placed in three Woodbury-hives, just when breeding commenced. The bulbs were inserted between the bars where the brood was, and the temperature was frequently as low as 48°. On the 15th of February one thermometer indicated 45°. The temperature gradually rose during the summer, though not rising and falling quite so much as out of doors. The thermometers remained long at 95°, and when they rose to 97°, the bees lay out. I never observed the temperature above 97°, unless the bees were disturbed, when it would rise to 120° or more.

I was asked by an old bee-keeper who had kept bees for more than fifty years in the old straw hives, to look at one of his which was not thriving. On turning it up I found it a mass of disease. I observed what I never did before, the young grubs unsealed-up, some of them nearly black, others streaked with black lines as if with pen and ink. There were also numerous drone grubs in the same state, and but few bees, which seemed not to be able to seal-up the brood, as it was seen in all stages diseased. It was the worst case I ever saw. The queen appeared to be active and healthy. The whole was destroyed.

I may also state that foul brood has made its appearance this year in the hive of a neighbour, who has been always free of it hitherto. It was only a few cells. I know of only one person in all this neighbourhood whose hives have not suffered more or less, and great numbers have entirely lost their stocks; but I hope a better day is coming for all. This season has been so good that the spirits of bee-keepers are again reviving, and should we have such another season next year, I doubt not but many who have managed to bring their stocks through the crisis, will be rewarded for all their perseverance and discouragements by a demand for stocks. To show the great decrease in the number of hives in this locality, in one place on the hills where I have counted 450 hives in former years, this year there were only 37.

I had fourteen hives at the heather this year, and they gathered 353 lbs. of honey, being on an average 25 lbs. each. The highest made 37 lbs., and the least 15 lbs. The fourteen hives contained 689 lbs. of honey, bees, and comb. The heaviest hive weighed 104 lbs. The like result has not been obtained in this quarter for a number of years.—ALEX. SHERRER, *Yester Gardens*.

THOSE among the readers of THE JOURNAL OF HORTICULTURE who have perused my communications on "Foul Brood, and Those who have Written about It," will be aware that the illustrious Schirach considered that this disease might arise from the queen depositing her eggs in a reversed position, so that the young bees, unable to extricate themselves from their prison, die and putrify. In this opinion he was followed by the Abbé della Rocca, Huish,

and more recently by the apiarian writer in "Chambers's Information for the People." The notion of young bees finding themselves with "their heads where their tails should be," appeared to me so whimsical, that although I certainly discovered a defunct young queen in this position in a royal cell in a foul-breeding hive, I paid little attention to the circumstance until reminded of it by "A DEVONSHIRE BEE-KEEPER," and assured by him that he had found diseased pupae in this extraordinary predicament. Since that time I have only once had the opportunity of examining perfect pupae in a diseased state, and in this case they were unquestionably inverted, their heads being in contact with the bases of the cells. On advertg to this circumstance in my correspondence with that accurate observer, "E. S.," I find, however, that he is unable to affirm it, and as I hope to have no further opportunity of investigating the point, I mention it in THE JOURNAL OF HORTICULTURE, on the chance of Mr. Shearer or some other correspondent being able to throw light upon it.

Whilst on the subject of foul brood, I wish to express my acknowledgements to Mr. Tegetmeier for directing my attention to Bonner's quaint and interesting description of this disease which appeared in page 303. I quite agree in the opinion privately expressed to me by an esteemed friend, that "it is creditable to British apiarians, that a disease so prevalent as foul brood appears to be, has not altogether escaped their attention."—A DEVONSHIRE BEE-KEEPER.

WINTER FEEDING.

Is brown sugar moistened with a little water, or rum and water, and pressed firmly into basins and turned over the top of the hive, a good plan for feeding bees in the winter?—M. F.

[We never before heard of, and of course have never tried, this plan of feeding bees, but cannot say that we are very favourably impressed with it. We believe winter feeding to be a mistake, and consider that the necessary supply of food should always be administered in the autumn.]

THE SQUIRREL IN CONFINEMENT.

WHEN a youth, this pretty little animal was a great favourite with me, and after some failures I succeeded in keeping one five years in the best of health. The most wholesome food I found to be a piece of bread, the size of a large walnut, steeped for about two minutes in milk, in such condition that he can hold it in his hands; "pap" I found invariably gave squirrels the rot, and they never survived long on such diet. In addition to the bread I kept in his cage a small pan of hempseed which he was very fond of, and allowed him to drink from a pan of water as much as he liked once daily. Nuts, fruit, and green buds he had as a treat occasionally. I have had squirrels so tame that they have lived in my pocket, and have gone with me wherever I went, and the pretty little fellows have had many a ramble in the fields and on trees, always returning at the shaking of a few nuts. Like most tame favourites, however, a violent death was generally their fate, so I was induced to restrict their liberty, and latterly confined them mostly in a cage. It is generally considered that a revolving cage is torture to a squirrel, I must differ entirely from this. On the contrary, it is a source of great delight and exercise. If the wheel by any means was stopped, the distress of the squirrel was extreme, and a gleam of pleasure could be plainly seen in his large bright eyes when it started again. There are two facts which struck me as contrary to the generally-received habits of the squirrel—the first was the extreme reluctance of the animal to jump; even half a yard in any direction but downwards required a very strong temptation, and nothing would induce a squirrel to jump where he could climb. I have noticed this peculiarity both in confinement and when at liberty. The other point is, no squirrel that I ever was acquainted with would eat acorns; they would seize them eagerly, nibble them, and drop them in disgust.—JOHN HUNTER, New Malden, Surrey.

NEW ENGLAND APPLE-SAUCE.—Make your cider of good, sound, ripe apples, and immediately on its running from the

press, and before it has an opportunity to "work" or ferment in the least degree, put it into good, clean, brass, kettles (they must be scoured and cleaned perfectly bright inside, the old verdigris and rust is poison), and boil it four barrels into one. Take good, ripe, sweet apples—(Tollman Sweetings are the kind I used), of the late fall or winter varieties—pare, quarter, and core them; then take a pan-full and put into your kettle of boiling cider, and let them cook through but not soft, so that the quarters retain their shape and size, and skim them out with the skimmer, and put them into the barrel, or whatever the sauce is to remain in—which, by the way, must be perfectly clean and sweet, or free from acid. When the apples are all cooked, the cider in the kettle will be somewhat reduced in strength, and must be boiled down to the state to keep well, and then poured into the cask with the apples, in sufficient quantity to cover them well and to have plenty of juice in the sauce when used.

In making true New England apple-sauce and boiled cider, much depends on having the cider boiled instantly on its running from the press, as it begins to ferment the moment the apples are mashed; and the warmer the weather, the more haste should be made, and also the stronger the cider should be boiled down, even six to one. In boiling the cider, if it should be necessary to defer boiling a part of it overnight, for want of time to accomplish it all in one day, it should not be allowed to remain in the kettle overnight, nor to stand in it when not boiling for any length of time, as it will attain a poisonous acrid taste. Care should also be taken not to boil so as to burn or scorch the cider on the sides of the kettles. When boiling the cider, all impurities should be skimmed off, especially just as it arrives at the boiling-point. The proportion of apples to cider must be to your own taste, whether thick with apple or thin with cider. If too thick with apple, more cider may be added at any time after; and also if the cider is boiled down too thick which cannot well be done in this warm climate, it can be reduced with water as used.—(Prairie Farmer.)

OUR LETTER BOX.

ISLINGTON PRIZE LIST.—We are informed that the Silver Cup for the best pen of Game was awarded to Mr. E. Aykroyd's first-prize Duckwing chickens.

WEAKNESS IN A DORKING COCK (A. N. E.).—Give him bread steeped in strong ale every morning and evening. Feed him on ground oats in the middle of the day. The most certain restorative is to give him the yolks of raw eggs, three or four every day, but it is a dangerous taste to encourage.

INFERTILE EGGS (Subscriber).—You probably have too many hens to the cocks. The eggs you mention are unimpregnated.

DEPRAVED APPETITE IN FOWLS (Guernsey Blue).—It is not an unusual thing at this time of year, during the moulting season, for fowls to peck off each other's feathers and eat them. It arises from a starved state of body, and a craving after unnatural food. They seek to eat the bleeding stub of the feather. The fowl appears well, and we are always advocates for leaving well alone; but if you wish to cure him of his cough, we think a dose or two of castor oil will do it. Lettices are very good for heated systems.

DIET OF POULTRY (Poultry Fancier).—Our theory has always been the same, and it has stood the test of many years of breeding. It is, during the period of growth to feed as well as possible, in order to supply the means of increase. Although in most instances pullets cease to grow when they begin to lay, that is only as regards the scaffolding; but the furnishing of plumage, and the filling-out of frame then begins, and although growth ceases, there is a constant increase of weight. Many amateurs consider sparse feeding that which we should call luxurious. Scantily-fed chickens cannot make large hens.

DISTINGUISHING GANDERS FROM GEESSE (W. X.).—Examination is the certain test of sex in Geese. There is sometimes difficulty even in this. You should ask the Judge who disqualified your pen. He will tell you his grounds, perhaps.

BOLTON GREYS (Bolton).—This is the local name for the Silver-pencilled Hamburgs. They are a distinct variety and come true to colour. They will bear confinement in a small space. They are one of our best egg-producers, but seldom are broody.

WOODBURY AND STEWARTON HIVES (Cornwall).—Messrs. Neighbour and Sons, 149, Regent Street, and 127, Holborn, and Mr. R. Eaglesham, Stewarton, manufacture, and will on application state prices of Woodbury and Stewarton-hives respectively. We can recommend no others in preference to these. We are unacquainted with the hive you mention, and shall be glad of a description of it.

LONDON MARKETS.—OCTOBER 22. POULTRY.

Trade is very dull at market. The supply is ample.

	s.	d.	s.	d.		s.	d.	s.	d.		
Large Fowls	2	6	to	3	0	Grouse	2	0	to	2	6
Smaller do.	1	9	"	2	0	Partridges	1	3	"	1	6
Chickens	1	6	"	1	9	Hares	2	0	"	2	6
Geese	6	0	"	6	6	Pigeons	0	8	"	0	8
Ducks	1	9	"	2	0	Rabbits	1	3	"	1	4
Pheasants	2	3	"	2	6	Wild do.	0	8	"	0	9

WEEKLY CALENDAR.

Day of Month.	Day of Week.	NOVEMBER 1-7, 1864.	Average Temperature near London.			Rain in last 17 years.	Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock after Sun.	Day of Year.
			Day.	Night.	Mean.								
1	Tu	ALL SAINTS.	51.4	33.3	46.3	21	56 at 6	32 at 4	48 8	40 5	2	16 18	305
2	W	Elm leaves fall.	54.4	37.9	46.2	16	54 6	30 4	47 9	28 6	3	16 19	307
3	Th	Sycamore leafless.	53.3	36.3	44.8	18	0 7	28 4	41 10	25 7	4	16 18	308
4	F	1 leaf leafless.	51.5	38.7	44.1	19	1 7	26 4	24 11	29 8	5	16 17	309
5	S	Ash and Hornbeam leafless.	53.5	38.2	45.9	18	3 7	24 4	after.	38 9	6	16 15	310
6	SUN	24 SUNDAY AFTER TRINITY.	53.0	38.2	45.6	19	5 7	22 4	41 0	31 10	7	16 12	311
7	M	Cherry leafless.	52.4	37.3	44.8	17	7 7	21 4	15 1	30 11	8	16 9	312

From observations taken near London during the last thirty-seven years, the average day temperature of the week is 53.2°, and its night temperature 37.5°. The greatest heat was 62° on the 2nd, 1857; and the lowest cold, 19°, on the 3rd, 1861. The greatest fall of rain was 1.03 inch.

DECORATION OF THE FLOWER GARDEN IN WINTER AND SPRING.

(Continued from page 398.)

FLOWERING SHRUBS.



Of these the most suitable are evergreen, but some of the finer kinds of early flowering deciduous shrubs are very desirable. Few exceed the splendid *Berberis Darwinii*; its foliage is handsome; it blooms freely in April (earlier against a wall and in warm situations), and its fine racemes of golden drop-like flowers render it one of the finest shrubs we have. A bed of it is unsurpassed by any yellow-flowering plant or shrub at that season. But the loveliest of all yellow beds is that formed by the tiny-foliated, yet dense, dwarf, *Berberis empetrifolia*; and not less beautiful is the gorgeous *Mahonia aquifolium*, which has handsome foliage and fine heads of yellow blossoms. The Berberies are easily cultivated in pots, and do well in a compost of light loam and leaf mould in equal parts. The first-named forms a fine bed of from 1 to 3 feet high, the *Berberis empetrifolia* one of from 1 to 1½ foot high, and the *Mahonia aquifolium* beds of from 2 to 3 feet.

The early-flowering kinds of *Erica* or hardy Heaths form admirable beds. The best low rose-coloured bed that it is possible to have for spring-blooming is one of *E. carnea*, and that known as *E. herbacea*, a flesh-coloured kind, little differing from the preceding. Then there is *E. mediterranea*, with pink flowers, which is handsome in habit, and makes a fine bed from 1 foot 6 inches to 3 feet high. The above, though doing best in peat soil, will thrive in ordinary ground, and, forming close balls, will move freely twice a year—to the beds in October, and to summer quarters in the last week in May, only they must be kept well supplied with water after removal.

Kalmia glauca, a free-flowering dwarf shrub, with reddish blossoms appearing in April and May, makes a nice bed. It likes peat, and so do all the American plants, and these are admirably adapted for planting in groups, the foliage being as effective as the flowers, which, as is well known, are amongst the handsomest we have. They all form close balls, and on this account may be transplanted with as much certainty in May or June, immediately after flowering, as at any other period of the year, it being desirable at that time to plant them in prepared beds of peat soil; but in autumn they may be removed to the flower-beds with as much soil adhering to the roots as possible, and planted in their winter quarters in ordinary soil, where they will bloom nearly (I think quite), as well without as with peat soil. They certainly are grown more safely in pots in sandy peat soil. *Ledum thymifolium* and *L. buxifolium* are dwarf and dense in habit, and form admirable edgings. They

are very pretty when in bloom, the blossoms being pink in bud, and expanding of a clear white. The variegated form of *L. thymifolium* makes a handsome edging, little more than 6 inches high. *L. latifolium* is a fine shrub from 1½ to 2 feet high, and its bells of white bloom are remarkably pretty in April and May.

Andromeda floribunda is by far the best of the *Andromeda* family, producing its pretty, wax-like, delicately-scented blossoms in great profusion in March and April. It is one of the best plants we possess, and is both handsome in foliage and habit. The flowers are white. A nice match-bed for this lovely shrub may be formed of *Peractya nancronata*, which has handsome foliage, and rather small, drop-like, white flowers. Some of the early-flowering *Rhododendrons* might also be employed. *R. caucasicum album* blooming early, and being of dwarf habit is admirably adapted for the purpose. *Rhododendron Nobleanum* and *R. atrovirens* are also very suitable. *Rhododendron ponticum variegatum* also makes a nice bed on account of its foliage. *Coronilla glauca*, with fine yellow flowers borne in great profusion, though usually found in greenhouses, is hardy enough to do well in sheltered situations, where it makes a bed of the loveliest description, and its variegated form (*C. glauca variegata*), is indeed fine. They will, however, only do in some localities. What is more curious and effective in its way than a bed of *Ruscus hypoglossum* or Double-leaved Butcher's Broom? Examine its bloom, and though the flowers are green, it is both singular and attractive; then, for forming a really gorgeous golden bed, *Ulex europaea* (Furze), single and double, will compete with anything of the same colour. They should be grown in pots in rather poor sandy soil.

For the beauty, as well as fragrance of their flowers, *Daphnes* may be planted, and of these any of the following are suitable:—*Pontica rubra*; and the striped form of the species (variegata), *D. encorura*, with pink flowers, and its variegated form, which has pink flowers in addition to variegated foliage. The *Daphnes* should be grown in pots of sandy loam and peat, in equal parts, with free drainage. To these may be added several *Coloneasters*, as *Simmondsi*, with the finest of scarlet berries in autumn and winter, and *C. microphylla*, by no means despicable as a plant for surfacing beds, and for edging others, affording berries in winter and flowers in spring; as standards on four-foot stems they are also ornamental. *C. rotundifolia* or *C. buxifolia* (I could never see any difference between the two), is suitable for a bed, and a standard or two will look well if judiciously placed. *Laurustinus* (*Viburnum tinus*), is another evergreen flowering plant that must not be overlooked, a bed or two of it will have a handsome appearance.

After these come deciduous-flowering shrubs, and when we have *Jasminum nudiflorum*, which is sure to flower at Christmas before the leaves are produced, and give a golden mass for some time, we have a fitting companion for the Christmas Rose, which I will note ere long. This *Jasmine* succeeds admirably in a pot of loam and leaf

mould in equal parts, and will flower as well on a wall with a north aspect as in the sunniest situation. *Rhodora canadensis*, with purplish blossoms in April, and which likes a pot and peat soil, and *Forsythia viridisima* and *suspensa* with their yellow trumpets, tell well. *Magnolia conspicua*, though attaining the dimensions of a tree, is not out of the way as a bush or pyramid pinched in like Apple or Pear trees, it being well supported by M. Soulangiana, and finely contrasted with M. purpurea, or obovata of some. *Ribes sanguineum*, aureum, and the white variety tell effectively when in a mass, and they grow so well in pots, and bloom so freely, even when small, that it is a marvel that they should have escaped being employed so long when there are so many empty spaces for them. *Moutan Pæonies*, too, in endless variety, bloom so much earlier when grown in pots as to be eligible for spring decoration. *Amelanchier botryapium*, treated as a bush Apple, is a sheet of snowy white in April or May; and managed on the same principle, the *Amygdalus persica flore pleno* and *flore albo*, *camelliaflora*, *caryophylliflora*, *rosea*, and *versicolor*, double rose, blush, pink, and white, are all fine. They require the pot-treatment of the Peach. And what is handsomer than the gorgeous scarlet of *Pyrus japonica*? It and the white-flowering kind, also the double, are all destined to occupy a prominent position in the flower garden in spring.

I do not know whether they are common shrubs or not, but it is rare that we see any of the Buckthorns, but most of them flower from April to June, and though the flowers are only greenish yellow, yet these shrubs are very fine. They may be grown as dwarfs, and pinched-in like some Pear trees. The only one that has white flowers is *Rhamnus frangula*. Why should we not also have *Chimonanthus fragrans*? which is most fragrant and likes peat soil; and we ought not to say our beds must remain empty for want of something to put in them until we have taken the last plant of *Chamaedon procumbens* from off the Scotch mountains. It is a trailing Azalea, not more than 6 or 9 inches high, with pink flowers in April and May. It requires a sandy peat soil.

Most of the foregoing are best grown in pots in the compost recommended for each, and where none is mentioned, it is to be taken for granted that they will grow in ordinary soil. All plants in pots require good drainage. This should, therefore, be provided, and water furnished before the want of it is indicated by the foliage. Under rather than overpotting is desirable to induce flowering more than growth. Evergreens in pots will need little water from November to March, and deciduous shrubs none during that period. At other times they should not be allowed to suffer from want of attention to watering, and it must be borne in mind, that the bloom of any plant will last longer when a plentiful supply of water is afforded.

G. ABBEY.

(To be continued).

THE NEW ROSES.

As usual, from all quarters the question is asked of me, "What do you think of the new batch of Roses? what would you advise me to have?" and as usual I feel how very difficult the office of a prophet is. I cannot look back with much satisfaction to the manner in which I fulfilled that office last year; for on referring to THE JOURNAL OF HORTICULTURE, where I ventured to give my opinion as to the Roses of the future, I find that out of the eleven which I fixed upon as likely to contain the best, three only promise now to be among the first rank. Less fortunate in this respect than Mr. Radclyffe, I may indeed perhaps this year hope to be a little more successful, for I happened to be in Paris at a better season; but even this is not much of a boon. Any one who has gone over in the hope of seeing the French seedling Roses knows how difficult it is to effect this. Either you are too early or too late, or, *malheureusement*, the nursery is so far off that you obtain very little information. Then the raisers of Roses are so scattered that it would require a long time to go through them all, and thus even those who go to far more trouble and expense than I did are disappointed in their researches.

I am still strongly of opinion that we must trust rather to the character of the raisers than to the glowing descriptions of the French lists. With that pardonable love for one's own children which leads many an English raiser of

florists' flowers to overestimate the beauty of his seedlings, they can see nothing but the most brilliant! remarkable!! splendid!!! magnificent!!!! varieties in their productions; and many of them, I am afraid, if they contrive to sell them, do not much concern themselves about our disappointment, or rather not ours, but those of the growers for sale. Amateurs rarely purchase until the second year, and then they have had the opportunity of seeing or hearing something about the kinds with their own eyes and ears; and by the autumn following their *début* a tolerably fair winnowing of the inferior ones has taken place. Following as nearly as I can the plan that I adopted last year of classing them under their respective growers, I shall, omitting the wonderful and in some cases incomprehensible descriptions of them given in the French lists, briefly sketch their characters, and say where I have seen or heard such reports as give one good reason to hope favourably; and first, then, with the Paris raisers.

CHARLES VERDIER.

So far as I can ascertain, there are only two Roses to be let out by M. C. Verdier this year, and one of these I know to be good.

1. *Duchesse de Caylus*.—A very well formed globular Rose, of crimson scarlet colour, and of vigorous habit. I am very much mistaken if this will not be found to be amongst the best Roses of the year.

2. *Duc de Wellington*.—A brilliant velvety red, darkly shaded; centre of the flower lively red.

EUGÈNE VERDIER FILS AÎNÉ.

When I was in Paris M. Verdier very politely brought me his seedling Roses to see at the hotel where I was staying. It was after that tremendous storm of the 18th of June had burst over Paris, deluging everything and beating down the heads of the poor Roses; and besides, several of them were only under numbers. There were these, however, which I selected, and they are likely to be valuable acquisitions. I may add, too, that I went through part of his seedling ground, and saw there many hundred varieties rejected which a year or two ago would have been thought superexcellent.

3. *Rushton Radclyffe*.—An odd combination of terms, unless we are to style our reverend brother as the Scotch do, the Radclyffe of that ilk, or drop the name and call him Rushton, like "Lochiel" or "Islay." Well, the Rose is a fine one, of the style of Madame Victor Verdier, very full and clear, with no shading, and I shall be very much surprised if it do not take a leading position.

4. *Auguste Rivière*.—Lovely carmine red; reverse of petals paler; edge of petals light.

5. *Comtesse de Paris*.—Lovely currant red; full.

6. *Docteur Andry*.—Beautifully imbricated; lovely carmine red. Very good.

7. *Général d'Hautpoul*.—Flowers in clusters; lovely scarlet red. I think this is the one that I had marked as next in merit to Rushton Radclyffe. If so, it is likely to be a valuable flower.

8. *Madame Verschaffelt*.—Plant almost thornless (I do not know that this is any particular merit); well-formed flower, beautiful tender rose.

9. *Souvenir de William Wood*.—A flower said to bear a likeness to Prince Camille de Rohan, only darker. If this be a correct description I did not see it; but one that is said to be an improvement on that fine variety must indeed be desirable.

MARGOTTIN.

10. *Charles Margottin*.—I see that my excellent friend only announces two flowers this season, and of these I have only seen the present Rose. It is a very large, brilliant, and showy flower, one of the very brightest I have seen, and I should think likely to be a valuable Rose.

11. *Mademoiselle Amélie Helphin*.—Lively carmine rose, well formed, and large.

MAREST.

12. *Duchesse de Medina Celi*.—Some two or three years ago, before Marest removed to his present nursery, driven out by the increase of buildings in Paris, he told Mr. Standish and myself that he had a grand Rose to let out: if this be the one it will, no doubt, be one of the best of the year. At any rate he has raised two Roses which ought to give him credit—Prince Léon and Comtesse Cecile de Chabillant, and

only these, as far as I can recollect. I think that we may then hope that the Duchesse, which is described as shaded blood-red purple, may be one of our best Roses.

LEVEQUE ET FILS.

13. *John Veitch*.—A very lively red; well formed; the plant very vigorous.

14. *Madame Eliza Vilmorin*.—Very free flowering. A curious Rose, somewhat puckered on the edges. I saw these Roses at Paris in the summer, but I cannot say that I was greatly prepossessed with them. And now for some of the Lyons Roses.

LACHARME.

An honest good raiser, who has every year sent us over something good, and whose judgment as to a Rose we may consider to be tolerably good.

15. *Madame Charles Verdier*.—A beautiful vermilion Rose, described as being between Baronne Prévost and Duchess of Sutherland; and if so, likely to be a very great acquisition. We want Roses of this character, and if Lacharme says that it is good, we may well give him credit for it.

16. *Xavier Olibo* (which I have no doubt will come to be called "Holybones").—This is described as a large, well-formed, velvety black Rose, amaranth shaded; and I dare say it will be amongst some of the foremost Roses of the season.

GUILLLOT, PÈRE,

Another raiser, to whom we are indebted for many good flowers, has this year some which promise well.

17. *Capitaine Rognat*.—A cupped, very full Rose; brilliant red.

18. *Madame Portier*.—Tender rose. Not very large flower.

19. *Monsieur Moreau*.—Beautiful purple Rose; flowers globular.

20. *Triomphe de la Terre des Roses*.—A beautiful violet Rose, very fragrant. Let us hope its name will be significant of its beauty.

It is difficult to say what these colours are, for I find the same colour oftentimes most differently described, or to what flowers they bear any analogy. They sound well, and 17 and 20 especially so. Let us hope they will sustain M. Guillot's character. I find I must defer further criticisms till next week.

A word, however, first as to Mr. Badclyffe's communication. I did not enter into the subject of white and light Roses generally, but only as I was asked, those of the Hybrid Perpetual class, or I should certainly have referred to those which he has mentioned. Madame Macker is an unknown flower to me, so I can give no information concerning it. I am more than ever convinced that we must, in speaking of Roses, especially as to their hardness or otherwise, make our observations conditional. Thus, Mr. Badclyffe says *Virginal* requires a wall; but it does not do so with me—it blooms and grows very well in the open border; while, strange to say, I have had *Madame Rivers* half a dozen times from various growers, and yet have always lost it, although I have in most places seen it growing in great vigour.—D., Deal.

LATIMERS.

(Concluded from page 336.)

In concluding our notice last week we left off at a bank, passing over which, and by the nice specimens it bears of *Pinus*, *Wellingtonia*, *Cypress*, *Abies pinsapo*, *Hollies*, and *Yews*, mingled with older deciduous trees, we reach a flower garden on the north side of the offices and mansion, and concealed from them by a dense thicket of *Yews*, *Hemlock Spruce*, *Hollies*, &c. This garden has a large fountain in the centre, with large flower-beds round it, and might have been a very pretty spot before the surrounding trees threw over it so much shade. Mr. Donaldson spoke of its being transformed into a fernery, and there are plenty of nice young *Yews* to continue the boundary all round, so that the place would not be seen until you entered it through an arch of *Yew* or *Ivy*. Roots and puddingstones were being collected for the purpose, and a few *Pinuses* on the higher points that will be thrown up, in addition to the surrounding boundary, will give a nice shade to the Ferns. A few *Alpines* and fine-foliaged plants among the Ferns will add

to the effect of the latter, and thus another distinct feature of interest will be formed within a few minutes' walk of the mansion. From the reservoir of water, forced up from the lake, water might grace this fernery as well as the elegant flower garden.

Passing hence through the pleasure-grounds, we reach the stables and the kitchen garden, the former a fine block of suitable buildings, but which there is some idea of removing farther eastward, so that the present road to them may be shut up or made strictly private. The kitchen garden, of about 3½ acres in extent, has the outside walls here covered with masses of *Laurels*, and, if the contemplated change take place, Mr. Donaldson expects to cover these walls with fruit trees. Under present circumstances the effect is very good.

Of the kitchen garden we must say little, as our critical gossip has been rather lengthy—gossip which, if it yield little pleasure, will, we trust, be equally powerless to give any offence. Notwithstanding the dry season, we found fine quarters of vegetables for present and for winter use, and among them a new curled *Berecole* from Mr. Veitch, which seemed to be an improvement on the Scotch Cabbaging Kale.

Among the fruit trees we noticed some nice trellises of strained wire, about 3½ feet in height, for *Gooseberries* and *Currants*, the trees in both cases being clustered with fruit-buds. We know of no plan so suitable for small gardens, a great amount of fruit of the best quality being thus obtained, whilst the ground between may be cropped with low vegetables. Such trellises, too, are easily protected from birds and wasps. Mr. Donaldson also assured us of a striking fact, that though the wasps attacked without mercy the *Gooseberries* grown as bushes, they did not at all interfere with those grown upright on the trellis. All the Apples and Pears by the side of the main central walk were root-pruned last season, the Apples to be kept down as low dwarf bushes, and the Pears to be grown in the pyramidal form, and all were bristling with buds and short-jointed wood. The trees against the walls had either been renovated, or taken up and replanted, or root-pruned with good effect. There were whole quarters of *Strawberries* in pots, most of them in 24's, each pot standing on an inverted saucer, with free space all round, and the plants were the finest and strongest we have seen for years—in our opinion just too strong; but no doubt they will produce fine masses of fruit. Of other sorts, Mr. Donaldson, for the main supply, prefers *President*, which he considers like *Keens' Seedling*, but greatly superior to it under glass.

There were a small Fig-house or two, a small and a large Peach-house, a span-roofed vinery in which the roots had been lifted, a Paxton-house for the million for various purposes, but with an upright glass front as far as we recollect, and the flap or cap between each two sashes capable of being raised at pleasure for the half or the whole of the length by a simple lever. The back wall of this house had several broad shelves, so that by these, in addition to the platforms, a great number of things may be stored. The main range of vineries is divided into three or four houses of good size—one pruned, one in which the wood was ripe, one planted with *Muscats* doing well, and one filled with fine *Hamburgs*. These, fine as they were, did not satisfy Mr. Donaldson; and he had cut out several Vines at one end, hanging the fruit in the fruit-room, and planted fresh ones, after having made a fresh border for them. He can draw some of the old stems over this part next season, and thus by degrees he will renovate this fine house and never lose a crop. These vineries are 17 feet wide, 17 feet in height at back, and about 14 foot in front. The borders outside rise pretty well to the water spout, and by the end of September were all covered with strong wooden covers, tarred or painted, to keep heat in and cold and wet out.

Among flowers, not to speak of pits, frames, small houses, &c., we found a nice greenhouse and stove. But we must mention only one thing about the plants, and that is, that the greenhouse was rendered more beautiful by a number of pots of *Convolvulus* or *Ipomeas* of almost every shade of colour, and tint, and stripe, the plants being allowed to twine about a branch or the top of a young tree fixed in the pot. These climbers in pots made a most attractive feature.

Out of doors we found fine plants of *Chrysanthemums*.

The dry weather and the grub had spoiled a border of China Asters, in the culture of which Mr. Donaldson used to excel; but as a consolation to us we noticed a nice border of herbaceous and bedding plants, and were informed that this border belonged to Lady Che-ham, whence she could gather flowers without interfering with the beauty of the rich parterre near the mansion. Something of this kind should always be provided where cut flowers in quantity are a daily desideratum. Nothing will so thoroughly paralyse energy and effort, as finding a first-rate bed of yesterday transformed into little better than a wreck to-day, through this person and that being permitted to gather flowers from it at pleasure.

One other fact, and we finish the account of our morning's inspection of this interesting place. On walking up the bank from the pleasure ground we observed cast metal pipes in trenches not yet filled (the joints, we think, closed with lead), for transmitting water from the reservoir in a higher position to the stables, garden, mansion, offices, clergyman's house, &c. This water of the reservoir is brought up the hill from the lake by the action of a water-wheel. We did not see the wheel as the place was locked, but we saw Mr. Metcalfe, the able superintendent of the farm, and his water-wheel was going, and helping to thresh, cut, grind, saw timber, &c. The water to turn this wheel is brought across through the wood by a wooden culvert from the lake, and over what is called the old stream, which acts as the tail course to the farm wheel. Mr. Metcalfe would like more power, but the cascade is only high enough to give him a breast instead of an overshot wheel. The wheel that drives the machinery for the supply of water to the mansion is entirely in a chamber beneath the ground level, and the tail water comes out beneath the cascade. If the water is too low to drive this wheel a horse can be employed to work the machinery. The cascade is a fine feature with the water foaming and frothing over it, but it is apt to be dry when the farm wheel is worked during the day. I raised the cascade some 18 inches, which raising would necessitate but little alteration in the present banks of the lake, and far enough back transfer the waters of the old stream into the Colne; and not only would much more power be given to the wheels, but, as the old stream would supply as much water as is now taken for working them, the cascade with its tumbling and sparkling water would be a thing of beauty every hour of the day. We need scarcely add that neatness and good culture were everywhere conspicuous.

The last word in the sixteenth line of the previous article, page 323, should be "winding" instead of "building."—R. FISH.

PROPOSAL FOR A ROSE COMMITTEE AT PARIS.

How can the inundation of new Roses from the continent be stemmed advantageously to the English growers? Facts go to prove that out of the fifty new Roses annually sent to this country not more than five or six live over three years in the public mind, or are worthy of a place as distinct varieties in any respectable Rose catalogue.

While I believe that the years 1866 and 1867, from the great heat of the present and last season, will place English raisers more on a level with their neighbours, something in the meantime must be done to prevent English growers and amateurs from being quite disgusted and discouraged in buying new Roses.

I would propose for consideration that a committee to protect the interests of the Rose be formed in this country, much on the principle of the Fruit Committee of the Royal Horticultural Society, to consist of say twenty of the first Rose growers, to sit at Paris every month during the Rose season. To carry this out a Rose Society would require to be set on foot, each member subscribing a fixed moderate sum to defray expenses including the sending out monthly three or more of the above committee to preside at the meeting in Paris, and give certificates of merit and prizes for the best new productions. The English judgment and taste would thus be better met, confidence restored, and time and money saved, as it would not then be necessary to grow in quantity hundreds of "novelties" two years before they can be faithfully recommended for our gardens. The

minds and pockets of honest nurserymen would not be hurt by consigning hundreds, nay thousands of the well-grown new Roses annually to the faggot-pile, where they ought to be carefully put to make room for better varieties.

Looking at the great and deserved love England has for her Rose, I consider this subject, which I have but feebly laid before your readers, worthy of the earnest attention of the Royal Horticultural Society, and of all who are interested in our national flower.—HENRY CURTIS, *The Devon Rosery, Torquay.*

LARGE PEARS.

SEEING in the Journal what the Rev. S. Reynolds Hole, of Cauntton Manor, near Newark, can produce from the Conseiller de la Cour Pear, I beg to enclose you a slip taken from the *Domestic Standard*, to show what can be produced from the Duchesse d'Angoulême. The weight of the eight Pears was 7 lbs. 14 ozs.—GILBERT TWEEDIE.

"A fruit-bearing Pear tree was shown by Mr. T. Tweedie, and is quite a prodigy. By a process which Messrs. J. Palmer and Son have carried out with singular success, the tree is dwarfed in size, so as to gain in produce what it loses in stature; and this specimen (a Duchesse d'Angoulême) has, under Mr. Tweedie's careful management, proved so prolific that, though little more than 4 feet high and growing in an 11-inch pot, it displayed eight immense Pears; one measured nearly 12 inches round, and weighed 14 ozs.; another, of rather greater circumference, weighed 1½ lb.; the rest of the crop being worthy companions of these individual specimens.

"When at Funchal, we had an opportunity which we gladly embraced of viewing the garden and greenhouse in which Mr. T. Tweedie practices with so much success as an amateur horticulturist; and we feel sure that if merchants and others of his class saw what he accomplishes with considerable care, but at comparatively small pecuniary cost, the luxury of a greenhouse would be much more generally indulged in. A few rare exotics figured amongst its contents, and from the roof hung quite a harvest of Grapes, similar to these large specimens which lent opulence to the exhibition. An aviary near by vied in attractiveness—we might almost say bore away the palm from even the fruitful vineyard. Such a collection of the feathered tribes is, we suspect, not to be readily found elsewhere in the possession of a private gentleman. In a sized—we cannot call it a cage—20 feet by 9, were more than a hundred birds, from the redbreast, the lark, the blackbird, the thrush, and others of a commoner kind, to the goldfinch, canary, starling, and pheasant, all manifesting a loving fellowship with each other, and forming such an interesting, happy family as was delightful to behold. An Oak stump in the centre, and various shrubs in other parts of the aviary, form the roosts or resting-places of the plumaged race, and there they were seen hopping from twig to twig, or taking a larger flight across, enjoying comparative freedom, and evidently in the highest comfort and health. A golden pheasant is the paragon of the entire establishment, and the creature, though superlatively handsome and most superbly attired, assumes no haughty airs, and lives in amity with the humblest of his brethren. The owner of this unique feathered republic is Mr. C. Tweedie, who, we suppose, feels as much pleasure in presiding over it as his brother does in his horticultural products."

LARGE CROP OF PEACHES.

In 1863 I ripened on eight trees 1600 Peaches, many of immense size; and in 1864, the same trees produced and brought to perfection 2500 Peaches not so large, partly owing to the drought. In the year 1863, about 4000 Peaches had previously been taken off; and in 1864, at least 5000 were also removed.

The eight trees are on a wall with a south-easterly aspect, have been about eighteen years planted, and have generally borne most abundant crops. In consequence of the fruit being for some years destroyed by spring frosts, I had a covering of thin canvass placed over them. In the first year when removing the canvass, I found an abundant crop of fruit but no leaves; these had been destroyed from keeping the covers over the trees night and day. In a short time fresh leaves came out, but all the fruit gradually disappeared.

In the following year I removed the covers every fine day and some fine nights, and the result was a splendid crop of fruit. This same result occurred several years in succession, until the sheets being weakened by age were entirely destroyed by a heavy shower, and the trees were that year unprotected. However, the spring being mild the crop was good. In the following spring when the trees were in full bloom, a heavy shower completely washed away the pollen, and in that year also I had not a Peach. Next winter I placed a temporary coping-board about 12 inches wide over the trees and left it there until about June, when the rain would be serviceable. The result was, that in that and every succeeding year I had splendid crops. This simple and cheap mode of protecting the trees I conceive to be far the best. I need only refer to the crops of 1863 and 1864.

An Englishman writing in a contemporary this year, says he had 510 Peaches on three trees, whereas I had 1124 on my two largest. I hope that the publication of this note will call forth remarks from Peach-growers, and I am anxious to know whether others have exceeded what my gardener has accomplished.—T. DALY, *Fair Hill, Cork*.

[We do not understand the measurements of the trees which bore these extraordinary crops. Mr. Daly in another letter says:—One tree, 23 feet by 10, 230; two, 20 feet by 10, 400; two, 20 feet by 10, 400. Whole length with eight Peach trees 128 feet. Now, as five trees occupy 103 feet, then only 25 feet are left for the other three.—Eps.]

NEW ROSES FOR 1865.

I BEG to acknowledge with thanks the receipt of Rose catalogues from Mr. Rivers, Sawbridgeworth; Mr. Cranston, King's Acre, Hereford; Mr. Cant, Colchester; Mr. Cattell, Westerham; and M. Eugène Verdier, Paris.

On perusing the lists of our own countrymen, it is satisfactory to find the improvement they exhibit by the rejection of large numbers of inferior kinds, with which they have in former years been too much burdened, to the no small perplexity of purchasers and the disgust of rosarians; there is yet room for further improvement, which it is hoped that the experience of another year will suggest. As it is, Mr. Rivers's catalogue is so carefully compiled that there is indeed little to complain of, and very much to praise and be pleased with. By not inserting the novelties of the current year, of which it is impossible, as well as unfair, to speak with certainty till they have been sufficiently proved, Mr. Rivers has acted quite in conformity with the thorough knowledge of Roses which has always distinguished him as a great authority in all that relates to them. If the other growers who deem it necessary to insert new kinds before fully proved were to give them in a separate list, as is sometimes done, it would decidedly improve their catalogues.

All lovers of the Rose owe a tribute of respect to M. Verdier for the many charming varieties originated in his establishment. He has also readily acknowledged the merit of English horticulturists by conferring their names on flowers originated or sent out by him—names that are highly esteemed and respected among us, as will be seen by the list presently to be given.

M. Verdier's announcements are in two lists—the first, published in September, contains the new kinds originated in his own establishment and some others sent out by him (for the perusal of this I am indebted to the kindness of the Rev. W. F. Kadclyffe, of Rushton); the second contains the kinds obtained from the seed-beds, and sent out for the first time by other French nurserymen. In these lists there are seventy-three Hybrid Perpetuals, seven Bourbons, two Tea-scented, three Perpetual Moss, two hybrids from Bourbon and Noisette, and one Microphylla—in all eighty-eight. These statistics are given that your readers unacquainted with the facts may judge for themselves of the enormous number of varieties yearly offered for our acceptance, and, of course, grievous disappointment if we are foolish enough to take the bait. Seeing, too, that the modest price of 25 francs—that is, 41s—is asked for a single plant of very many of them, our French friends must evidently have fast hold of the notion that "John Bull has more money than wit." It is a sheer impossibility that all of these new Roses can be improvements upon those we already possess; it is even

doubtful at present whether any of them are. There is nothing to indicate it in the descriptions given of them, with one exception to be presently noticed. If, therefore, this annual influx is not steadily resisted by our great growers, with some reservation, their collections will continue to be disfigured by kinds not entitled to a place in them.

The following are selected from the list, with the descriptions given by the raisers. They are all of them stated to be of vigorous habit, with large and full flowers, and may probably in time be found to be of some merit. It is quite useless to entertain any expectation of sorts in our climate that have not a sound and hardy constitution. If any hope on the point may be expressed it is that the kind bearing the name of the worthy rector of Rushton may prove a sterling acquisition, it will then be a recognition of merit, reminding the Rose-loving public of a good and painstaking rosarian.

Docteur Andry (Verdier).—Perfectly imbricated; deep reddish carmine; flowers about 12 centimetres in diameter (4½ inches). A variety of the highest merit.

Rushton Radclyffe (Verdier).—Perfectly imbricated; fine cherry red, clear and distinct; from 10 to 12 centimetres in diameter (4 to 4½ inches).

Souvenir de William Wood (Verdier).—Blackish purple, very dark, similar to Prince Camille de Rohan, but darker; flowers from 9 to 10 centimetres in diameter (3½ to 4 inches).

John Keynes (sent out by Verdier, but not obtained from his seed-plots).—Vivid reddish scarlet, shaded maroon; 10 to 12 centimetres in diameter (4 to 4½ inches).

William Bell (sent out by Verdier).—Globular and well formed; bright cherry red; about 12 centimetres in diameter (4½ inches).

Charles Wood (Portemer, jun.).—Deep red, shaded blackish, of fine form; 9 to 10 centimetres in diameter (3½ to 4 inches).

Denis Helys (Gautereau).—Very erect; bright rosy carmine; 12 to 14 centimetres in diameter (4½ to 5½ inches). A very effective variety.

Madame Moreau (Gonod).—Cupped, peony-shaped, with large petals at the circumference; bright dazzling red, shaded with violet; 12 to 14 centimetres in diameter (4½ to 5½ inches).

Charles Margottin (Margottin).—Brilliant carmine, with fiery centre.

Duc de Wellington (Granger).—Bright red, velvety, shaded black, with lighter centre.

John Veitch (Leveque).—Well formed; fine, vivid, shining red.

Madame Charles Verdier (Lacharme).—Well formed; fine vermilion rose, between Baron Prevost and Duchess of Sutherland.

Me l'emoiselle Loide de Falloux (Trouillard).—Fine form; white, slightly tinged with rose.

Monsieur Boncenne (Liabaud).—Cupped; velvety, blackish purple.

Xavier Oillo (Lacharme).—Fine form; velvety black, shaded fiery amaranth.

One of the most promising, should it prove sufficiently hardy, is the *Tea or Noisette*.

Maréchal Niel very vigorous, with long, stout, reddish branches; leaves consisting of three or five leaflets, extra large, shining and undulated; flowers full, from 12 to 14 centimetres in diameter (4½ to 5½ inches), of a beautiful deep yellow, intensely fragrant. Obtained some years ago by a horticulturist in the south of France, and it has till the present time remained unknown. This magnificent Rose is the most beautiful of all the Noisettes, to which belong *Chromatella* (Cloth of Gold), *Isabella Gray*, *Jean Hardy*, *Sollaterre*, &c., and surpasses them in habit and abundance of bloom. So says M. Verdier.

But if all the above are at present little known to us except by name and the raisers' descriptions, there are some by our own countrymen now being, or about to be, distributed which may be depended on, and, therefore, worth immediate attention. Such are *Princess of Wales* (W. Paul), *Dr. Lindley* (W. Paul), *King's Acre* (Cranston), *Beauty of Westerham* (Cattell), a fine autumnal Rose, fully described at page 312.—ADOLPHUS H. KERT, *Blechnigley*.

PLACE AUX DAMES!—I have just been shocked to read, in the Rose catalogue of Messrs. William Wood & Son, that "*Reynolds Hole*, cupped and double, is in the way of *Louise*

Odier;" and as this can only mean that I, in a state of inebriety, and in the position which schoolboys assume when giving each other a back at leapfrog, am obstructing a young lady's path, I think it my duty, as a married clergyman, immediately to assure your readers that I am perfectly sober, perfectly straight, and have never performed gymnastic contortions in the presence of Miss Louise Odier.—REYNOLDS HOLM, H.P.

DOUBLE-GLAZED FRAMES FOR EXCLUDING COLD.

THERE are so many persons who desire to save their plants during winter, who have no means of applying heat in any way, that I think I may do them a service by bringing to their notice the plan I have found so very useful—viz., a double frame to keep out the extreme cold.

This idea I obtained from seeing double windows employed in several London houses, in Piccadilly, and the west of London generally, to keep out the noise, and maintain the rooms at a more equable temperature. Knowing well, as I do, that a stratum of air between two glasses will keep out noise, heat, and cold, the adaptation of this principle to preserving plants in winter is not very surprising, and having in practice for two or three years proved its value I now bring it before your readers in order to verify my discovery, or rather adaptation, of a fact well known.

I have had my lights made with a very broad frame, so that two sashes can be made upon it, one under, one over, so that they both lift at the same time, when it is necessary to give air to the plants beneath. I have some of the usual—shall I say old-fashioned?—glasses, the snow has fallen upon them, and I find a very marked difference in the melting of the snow. The snow rapidly disappears from the single lights, but on my double sashes it remains. I will not go into the science of radiation, conduction, transmission of heat, &c., suffice it to say to a gardener, that with a double light the cold will not go down to half-buried pots or plants as through a single light.—SEPTIMUS PRÆSE, Ph.D., F.C.S., &c., Chiswick.

NOTES MADE IN THE ENVIRONS OF PARIS DURING A VISIT IN SEPTEMBER.

ABOUT five years ago you were pleased to insert in your pleasant and useful Journal, a few notes made by me during a visit which I had then paid to the Valley of Montmorency, celebrated for many horticultural productions—amongst fruit, Pears, Peaches, Grapes, Cherries; and amongst vegetables, notably Asparagus.

I have again paid a visit to that beautiful country, and I am not singular in my estimate of it, for since I was last there a vast number of country seats of more or less importance have sprung up, the Parisians having taken a lesson out of our book by residing in the environs, not, it is true, quite to the extent we do here, but leaving Paris for five or six months of the summer only. It takes a long time to reconcile ladies who have resided all their lives in so gay and so fascinating a capital as Paris, to satisfy themselves with the quietude and domesticity of a genuine country life. No opera! No theatres! No society even—at least not that varied and amusing one which they have been accustomed to. A country residence, therefore, during the winter months would be looked on as little less than an expatriation. In fact, until a radical reform takes place, it would be difficult for a family to carry out such a project, unless they made up their minds to do so in the most primitive style, and wait upon themselves; for one of my friends having made up his mind to give up his town house, coachman, footman, cook, lady's maid, and all the rest of the fry, waited upon the mistress to inform her that they must leave her service. "Why, what does all this mean? What is the matter that you should thus all wish to leave at the same moment?" "Well, Madame, we are very contented and very happy in your service, but we hear that it is your intention to remain in the country all the year round, and in the winter we should all die of ennui."

When it was told to me, I remarked at once, "Well, you let them all go of course." "Indeed, we did not, but, on the contrary, gave up our project, as we were quite certain that we should never be enabled to replace our old servants by others."

Time, however, works wonders, and in the course of a very few years I have no doubt we shall see families making the country their permanent residence, and this will produce a favourable effect by increasing the traffic on the railways, which, except by the morning and evening trains, is very small even during the summer months, as families residing for six or seven months of the year in Paris, have no desire to go there very frequently. Of course, I am alluding to the families of merchants and those engaged in commerce. Constant residence would also tend much to encourage horticulture, for although a vast deal of money is already expended in the pursuit, yet it is confined to those who may be strictly termed the rich. These have certainly very pretty and tolerably well-kept gardens, and, as a rule, very extensive ones, but they would be neater-looking, bear examining more minutely did their owners have them constantly under their eyes during the winter as well as summer months. Well-kept lawns would then be better appreciated, but I see no improvement in them since last there. The ladies, who take the initiative in all gardening matters, appear to understand the difference between an English and a French-kept lawn, but they are powerless over the obstinacy and stupidity of their gardeners. Talk to one of these latter about cutting the grass once a-week and he would simply think you mad. As to rolling and cutting edges, it is quite out of the question, and the iron roller continues to be unknown.

I am only referring to the private gardens. The public ones decidedly take the lead. In them every available implement is taken advantage of. I saw one which may be known here, but was quite new to me. It was a double roller, or rather a pair of rollers, one following another and worked by a locomotive. The rollers were, I should say, 4 feet in diameter and of great power. The grass-cutting machine I could not hear of either in Paris or its environs. What are Messrs. Green about? What Messrs. Shanks, that they do not make their machines known? They are wanted badly enough, for even in the public gardens the lawns do not come up to the standard of excellence required by the critical eye of an Englishman. In other respects these gardens are tastefully laid out and artistically arranged. The system of ribbon-beds and massing is not carried out to the exclusion of mixed borders, which I examined with minute attention. The harmony of colours was well observed, as was geometrical precision as to distances, and every border was a mass of either flowers or foliage, although there was nothing strikingly new to record. Clumps of Fuchsias hiding the stems of standard Roses, Gladioli serving the same purpose, Dahlias tied up as they grew so as to form a straight column, were stiff perhaps, but the blossoms were concentrated, none straggling about or hanging down.

I have said that the borders were a mass of flowers or foliage. This latter may not seem a desideratum to us; but French taste runs much on handsome-leaved plants of the tropical class, amongst which Cannas figure to a considerable extent. These are used both as single objects and in large masses without the admixture of any flowering plant, save, perhaps, an edging of some large Geranium—the Pink, much the same colour but larger than Christine, being a favourite. By-the-way, does Tom Thumb grow larger there than here? it so appeared to me. But to return to the mixed borders. Every plant is placed in a hollow, so that water may be given without fear of its running away from the roots. The system of watering, too, is good and uncommon. A series of India-rubber tubes is formed by screwing one into the other until the required length be arrived at. These tubes are perforated with very small holes, and care is taken that in screwing them on to each other, the holes form a continuous and straight line. The tubes are laid on the ground, alongside a border let us say, the cock is turned and a fine and gentle shower falls on everything within its reach. One man can thus regulate a long length of tubing, removing it from time to time as required. I saw this system in operation in the gardens of the Tuilleries and the Jardin d'Acclimatation.

matation. In the latter place I was caught in the shower when strolling off the public thoroughfares.

But I shall tire your readers by this discursive chat. I sat down with the intention of addressing you upon one subject, and I have not yet touched upon it. I mean

THE CULTURE OF ASPARAGUS.

It appears to me that we have yet much to learn of the cultivation of this much-esteemed vegetable. The noted grower in France, is Monsieur L'Héaut, of Argenteuil, the neighbourhood where I was visiting. He is, no doubt, known to many of our horticulturists, as he has been studying the growth of this vegetable for the last twenty years, and has carried off eighteen medals, three being enamel, one bronze, twelve silver, and two gold. One of these last was from the Brussels Show of this year, where, by the way, it was stated that with the exception of the Père L'Héaut, the French made themselves conspicuous by their absence.

Le Père L'Héaut for many years possessed but one hectare of land (a little less than 2½ acres), upon this he confined himself to the cultivation of Asparagus; but from it he derived an income of 4000f.—say, £160 per annum. He sells his produce to the first-class restaurants and purveyors of Paris at inconceivably high prices. He produces bundles containing thirty-five heads, measuring 14 inches long, and weighing 6 kilogrammes, or roughly 12 lbs., for which he receives from 25f. to 30f., and that during the entire season. The smaller heads sell at from 5f. to 10f. He has latterly been joined by his son, the firm being now L'Héaut, Salbœuf et fils, and they have added considerably to the extent of their land. On one piece I saw 2000 plants, on another 1700.

Argenteuil being only a few miles from the residence of my host, I drove over and saw both father and son. We happened to hit on the very first day of the vintage, every hand was in the fields, but we found Madame L'Héaut, the son's wife, and she with genuine French amiability insisted on conducting us to her husband. Leaving our carriage, therefore, with the groom we trudged through the vineyards, and a most animating sight it was. It was just the moment of the midday repast of bread and Grapes, and the various groups looked like so many pic-nic parties, everybody was very merry, for the groups were not composed merely of the labourers but of their friends also. All are welcome at such a time to eat their fill. A quarter of an hour's walk brought us to the vineyards of Père & fils L'Héaut. The first I found a plain unpretending gardener of the old school, with an idea about going a-head nevertheless; the son a fine specimen, physically, of a Frenchman. He had been a soldier, of course, had a good intelligent face, and we soon found him to be thoroughly up to his business. The father being occupied with looking after his people, the son ciceroned us, after dispatching to the wine press two carts laden with open barrels filled with Grapes of the morning's gathering. From him and from a pamphlet which he gave me, published by himself, and entitled "*Culture des Asperges en Plein Air*," and sold at 50 centimes, say 5d., I learnt the following:—

The Asparagus flourishes best on an old vineyard, as the copious nourishment given to the Vine suits it. The older a soil and the more worked it may have been, always provided that it has been constantly well kept up, the better.

The seed has much to do with success. At the commencement of their career they grew the Hardy Dutch, a very productive variety but not bigger than the middle finger, and having the disadvantage of producing its crop all at once. For many years past they have saved their own seed from some they originally had under the name of *Rose de Hollande Perfectionnée*. This variety is in quality and size much superior to that grown in the locality. It produces during a longer period, and gives first-rate and increasing crops up to the age of six or seven years, and will then continue good for another twenty years. For the raising of this seed and its cultivation I must refer your readers to the pamphlet in question. I must confine myself to the plant itself.

In the selection of the ground never take the site of an old Asparagus-bed. A soil slightly clayey suits the *Rose de Hollande* best; but this variety up to its sixth year is not an abundant producer, although it amply makes amends by its exceptional size and quality, by the longer duration of its season, and by the greater longevity of the plants.

A sandy and dry soil suits only the smaller varieties of Asparagus.

In making a plantation no beds are raised above the surface. Holes are dug on the level ground in the autumn 20 inches in diameter, and 6 inches deep, 1 yard apart, and 4 feet distance in the rows. The earth taken out is placed between the rows in the form of hillocks, which may be used for early Potatoes, Lettuces, or Dwarf Beans—anything in short that comes off early. Into each hole is thrown 3 inches deep of half-rotten stable manure mixed with cowdung and town rubbish, or in default of this last, road scrapings and rotted vegetable refuse—the older the better. It is covered to the depth of 1½ inch with some of the earth taken from the holes.

In the month of March, towards the end in this country, the one-year-old plants are put in by opening a hole with the hand between the manure, one plant to each hole, taking care to spread out the roots carefully and equally; cover with 1½ inch of the soil, pressing the extremities of the roots strongly down, place a stick to each to mark the spot that no injury may arise when digging the ground.

During the summer months keep the ground as free from weeds as a lady's flower garden. In the autumn when the stems are nearly dry, cut them down to the height of 6 inches. Should any have failed let the stick remain to indicate the spot, and replace in the following March: In the month of November the roots should be subjected to the action of the atmosphere by removing a little of the earth from the surface; and in this state the plant passes the winter, for it must be borne in mind, that Asparagus does not suffer from cold, but moisture, and the more earth there may be over the crown the greater will be the amount of such moisture.

The cultivation for the second year is the same, except that a little more soil may be thrown over the crown at the beginning of April, and a stake 4 feet long should be placed between every alternate plant, so that the two plants may be attached thereto, in the autumn, to prevent their being blown about or broken off by the wind, which is very injurious. The wind causes the stems to make holes at the base, into which the rain enters and rots the crown.

In the third season of their growth, about the middle of March, if warm, the ends of the stalks should be removed, and each plant should be earthed-up to the depth of 8 inches for the stronger, but less for the weaker. These mounds should be raised exactly over the centre of each crown. The largest heads may be taken during fifteen days only, and when about 2 inches high, as a rule we should be satisfied with taking from three-year-old plants two heads from each. You will observe that I do not use the word "cutting," but "taking" off. I must be permitted to tell a little story thereon. At a Meeting of the French Horticultural Society in Paris, various knives for cutting Asparagus were sent in by makers. The President, the Comte de Morny, said—"Well, gentlemen, I think we must leave it to the most experienced man in France on this subject, Monsieur Père L'Héaut, to decide on the merits of these;" but to the amazement of all present he stated that he knew no more about it than they did, for he never cut a head in his life, and should consider it murder to do so. Being called on to explain, he did so to the following effect:—

"The earth is removed until the two fingers arrive at the head of the crown, the stalk is then thrust off (much as we take off Rhubarb-stalks I presume). If, however, it will not come off without injury to the crown, a blunt knife is placed against it close to its junction with the latter, and it is snapped off by pressure. The crown is then earthed-up again. In the autumn all the earth is removed down to the crowns and replaced by the compost already alluded to, a little of the old, light, pulverised soil is thrown on again, and the ground between the rows is then well dug-down to the roots, taking care, however, not to injure them. In the March of the fourth year the earthing-up may be increased in height to 10 inches. More heads may now be taken from the plants and during a longer period. In the spring of the fifth year the soil may be earthed-up in one continuous line, and fresh compost put in the alleys in its place. This compost serves to walk upon, and is getting into condition for use in the following year. In the autumn the ground is again levelled, and this is continued from year to year. During the fifth year the gathering may continue for a

month; and in the sixth year the plants are in perfection, and it may be carried on for six weeks; but the season for this vegetable ought never to extend beyond that period, except by beginning earlier with forced plants."

It may interest some of your readers, particularly small gardeners, if I give my calculation of the profit derived from the growth of this vegetable by M. L'Hérault.

I have said that the produce of his £ s. d. £ s. d.
hectare of land brought him in 4000f.
a-year, which we will call 160 0 0

I cannot say what is paid for land in Argenteuil; therefore, I will take it and labour at its worth here—say, then, for rent 22 0 0

With the exception of carting compost, the whole was cultivated by himself. I take his own labour then at 4s. a-day—a high rate here, quite unknown in France. That would be ... 63 0 0

Forty loads of compost and delivery at 10s. (Is it too much or too little?) 20 0 0
————— 105 0 0

Nett profit $\text{£}55$ 0 0

I have no doubt the profit is much larger in France, but an English gardener would not look with contempt at that, I think. I shall be glad to be set right on any of these points, and, in fact, court criticism. I see already that I have omitted one item—viz., the delivery of the Asparagus daily throughout the season. This expense must be deducted from what I have given as the nett profit.

I mean to try this system, and have ordered my few plants to be sent me at the fitting time, which will be in the month of March, and they will be one year old. M. L'Hérault will not recommend a plantation to be begun with older ones. He insists that nothing is gained by it.

If you think my annual progress would be at all interesting, I shall be happy to give you a few lines thereon this time next year.—H. S. WATSON, *Old Charlton*.

COMPARATIVE PROLIFICACY OF POTATOES

I SEND you the results of experiments made by myself in the produce of various sorts of Potatoes, which I can vouch for having had exactly the same sort of treatment in every way. They were grown in what we call black soil, which produces Potatoes largely, but not, perhaps, of so good quality as brown soil. I have, however, found them all to be good eaters. Paterson's Blue is a beautiful Potato in appearance, and of great size; I had several Potatoes weighing 31, 30, 29, and 28 cwt. The Napoleon is a very rank-growing Potato, with haulms as thick as a strong walking-stick. It is a good eater, but from its great haulm must be an exhausting crop. The Fluke figures badly, possibly from a want of change of seed. My own experience would make me think that it does not crop so heavily as formerly in this neighbourhood. Nos. 1, 2, 3, 5, 6, 8, 9, 13, and 14, were all got from Scotland, from different places. I had no preference. I tried the experiments fairly.—W. W. H., *Prescot, Lancashire*.

Weight of Sets.	Sort.	Weight of Marketable Produce.
1.—14 lbs.	Paterson's Blue.....	615 lbs., or 44 times the weight planted
2.—14 lbs.	Paterson's Regent	539 lbs., or 38 times ditto.
3.—14 lbs.	Peter o's Red	401 lbs., or 29 times ditto.
4.—14 lbs.	Duchess's Early	394 lbs., or 28 times ditto.
5.—14 lbs.	Paterson's Oval Blue	359 lbs., or 25 times ditto.
6.—14 lbs.	Paterson's Victoria	329 lbs., or 23 times ditto.
7.—11 lbs.	Went's Imperial	272 lbs., or 19 times ditto.
8.—14 lbs.	Paterson's Napoleon	229 lbs., or 16 times ditto.
9.—14 lbs.	Dalmahoy	221 lbs., or not quite 16 times ditto.
10.—14 lbs.	Pink-eye, Kemp	190 lbs., or more than 12 times ditto.
11.—11 lbs.	Arrowsmith's Seeding	179 lbs., or 13 times ditto.
12.—14 lbs.	Fluke	95 lbs., or 7 times ditto.
13.—14 lbs.	Roscoe	92 lbs., or 6 times ditto.
14.—8 lbs.	Roscoe's Early.....	272 lbs., or 34 times ditto.

FLOWER FARMING.—Take a pair of compasses and strike an arc on the map of the French shores of the Mediterranean, making the Fort of Antibes the centre, open the compasses to Nice, and strike round—the highest point will be Grasse; then descending again to the shore in an opposite

direction, the compass leg will mark the fringe of the Estrelle hills, and the well-known town of Cannes, with Lord Brougham's villa. From Nice to Cannes it is twenty miles, and from Grasse to the shore ten miles. The three towns form a geographical triangle, having the tideless blue sea for its base. Within this triangle is the valley of the Flower Farms. There are flower farms in England also, but they are insignificant in comparison with those of France. Elsewhere flowers are ornaments—charming accidents. Here they are staples. They grow like grass and corn, like Potatoes and Mangold Wurtzel. Here bloom the Jasmine, the Orange, the Violet, the Tuberose, the Jonquil, the Rose, the Cassia, not as in our beds, not as in horticultural gardens, not as gardens, but as fields. Broad acres of colour flash under the hot sun. The atmosphere is heavy with perfumes when the snows are melting on the mountains, and the gurgling Var is rapidly growing into a roaring torrent. Here we enter homesteads not of golden grain, but of Lavender sheaves; not of cheese, but of olive oil; not of beer and elder wine, but of orange-flower and rose-water in vats; not of clotted cream, but of jasmine and violet butter. It is like a country of the "Arabian Nights." You expect the dark-eyed peasants to answer you in lyrics, and the very dogs to bark in tropes. You are oppressed with the prodigality of splendour. The soil is so fertile that, to borrow Douglas Jerrold's witty conceit, if you tickle it with a hoe, it smiles with a flower; or, as the natives say, if you plant a walking-stick, the ferule will blossom.—DR. SEPTIMUS PRUSSER, in the *Cornhill Magazine*.

CHOICE PEARS.

I SEE that the Rev. S. R. Hole has recommended a Pear. I will venture to recommend a first-rate one, Beurré Superfin. I tested it by my Marie Louise, which is also a first-rate Pear, but not quite so good as Beurré Superfin. I tasted also at the same time Marie Louise d'Aecle. It is delicious, very handsome, and of a beautiful colour, golden russet. In July I tasted Doyenné d'Été, a good cropper, and nice for an early Pear. Beurré Mauxion, and Comte de Lamy, are good croppers, and very good.

Mr. Rivers made me a present of twenty Pear trees on the quince stock, and they were planted on the 25th of March and 9th of April this year. I am quite pleased with the little trees and their fruits. Two had no blooms, and one, Madame Millet, dropped its fruit. The others I have not tasted, as they are late Pears.

Doyenné d'Angou is a fine Pear; Duchesse d'Angoulême is very fine, three Pears not yet ripe weighed 25 ozs.; Beurré Beaumont bore fourteen handsome Pears, and is the healthiest-looking tree of them all; Beurré Mel is very fine.

The little trees, several of which bore fourteen Pears, have much pleased both me and my visitors. I shall move every plant yearly, and put some decayed dung and mould under them, and I do not expect to report, as some have done, a failure with Pears on the quince stock. I recommend people to procure Mr. Rivers' twelfth edition of the "Miniature Fruit Garden."

As I am on pomology, I may mention that when I had the pleasure of dining with Dr. Hogg, I tasted some excellent Grapes from Mr. Rivers. I have forgotten the names of all but one, and that was first-rate, the Early Smyrna Frontignan.—W. F. KADLYFFE, *Rushton*.

GARDEN REQUIREMENTS FOR NEW ZEALAND.

REPLYING in part to the inquiries of your correspondent, "J. C.," in your paper of the 25th, we beg to say we send out monthly considerable quantities of grass and other agricultural as well as garden seeds to New Zealand, and we gather from this that settlers there do not grow their own seeds, which is confirmed by a gentleman to whom we annually send large quantities coming to England this year and ordering a still larger supply. We should recommend your correspondent to take out tools with him, he would be sure to get what he wanted here, which he might not be able to do in New Zealand. With regard to plants of Strawberries,

and Quicks, we do not know whether they would undergo such a journey, but a "fruit nurseryman" would, doubtless, know. If they are taken they should be packed separately. Seeds for New Zealand should be packed in stout wooden cases lined with inc, which are of no small value over there.—*Sutton & Son, Reading.*

I am able to answer "J. C.," having spent fifteen years in that country. I have seen Strawberry plants taken out in a small Waiian case, but "J. C." need not go to that trouble unless he has some very extraordinary sorts. He will find plenty of Strawberries in New Zealand.

Tools are to be had at all the chief towns. However, he might take a light spade with extra bindings on the handle, and a small fur-pronged Potato-fork. He would also find a light single-edged billhook handy. Quick thrives well in stiff clay soils, but in the light soils of New Zealand it fails, and Furze is given in its place. Quick does well in Nelson, and in some parts of Auckland. In Taranaki all the hedges are of Furze. Grass seed is grown extensively in New Zealand, but a light good Perennial Rye Grass would always find a market. Red Clover does not seed there, consequently that may be taken; but the colonists look with suspicion on English seed, it is so often spoilt on the passage. Seeds of the Brassicas are more often good than any other. "J. C." may take the Cabbage, Cauliflower, Radish, and similar seeds, and will find a market for them, as the colonists find a difficulty in producing seeds of this family in a pure state.

English-grown Onion seed always fails. "J. C." will find the American blight very destructive to the Apple trees. If he can take out a remedy he will do some service. A fungus is very destructive to the roots of exotic trees. High winds are another trouble some. With these exceptions he will find New Zealand a fine country. He must make up his mind to forward work; for gentlemen gardeners are very rare in the country. With industry, sobriety, and perseverance success is certain.

"J. C." must not put his seeds in the ship's hold, but just keep them in a box in his cabin. The damp heat of the hold in the Tropics destroys their vitality.—*BENJ. WILKS, 1, Orchard Place, Plumstead Road, Woolwich.*

ENVILLE HALL.

THIS magnificent demesne of the Earl of Stamford and Warrington, is situated about six miles from the thriving, busy town of Stourbridge, which itself is nearly a mile from the railway station. The traveller who goes from and returns to Birmingham, will require a fair stock of patience, amidst the waitings and changings at Dudley and Dudley Port junctions, &c. On leaving the west side of Stourbridge, we noticed a neat, handsome church, school houses, residence for teachers, and at a short distance a residence for the clergyman, all erected and presented by William Foster, Esq., M.P., to the inhabitants of Stourbridge. Ere long we notice in a hollow on the right hand the homestead of the above benevolent gentleman, Stourton Castle, celebrated as the birthplace of Cardinal Pole, and for the attempted battering it received from the cannon of Cromwell, placed on the towering peak of Kinver Edge. Many and somewhat contradictory are the traditions amongst the people, as to the success or failure of the cannonading. Kinver Edge itself, with its frowning peak becomes a fine feature in the landscape. As we mount the high crests of the road, we get fine views of the beautifully wooded, undulating hills that, mingled with large intervening breadths of sheep-walks, form the back grounds of Enville. As we have stood on the Hoe at Plymouth, and admired the rich verdure of the woods of Mount Edgcumbe, we have felt that the bald waste that crested the hill, detracted from the richness of the luxuriance that skirted the shores. There is nothing of this at Enville, as we approach it, because the rich pasture-lands that on these elevated plateaus diversify the landscape, are themselves bounded by luxuriant woods, forming the sky outline.

Ere long passing the old kitchen garden, still used for growing vegetables, and through part of the race course, a large waste covered with heather and fine masses of sombre bonnet-headed Scotch Firs, we reach the village, and in-

stead of going north-westward some ten miles to Bridgenorth, or right forward into a splendid hotel, just now built, chiefly for the accommodation of visitors, we turn into a private road on the left, pass the north end of the kitchen garden, and the finest cricket ground in England, of six acres in extent, level throughout, and beautifully kept, on one side of the road, and on the other side, after passing Mr. Craw's house, the post office, several private, and one public entrance to the pleasure grounds, we arrive at the mansion, a substantial, commodious structure, and as we were informed, most beautifully furnished, and elegantly decorated within; but in its low level position, and external plainness, forming a striking contrast with the vast and the magnificent around it.

Now, where shall we begin to give our readers some idea of the impressions left on us from our hasty visit to this interesting place? After a little consideration, we think it will be best first to look through the kitchen and fruit garden, because after all these are the concerns of the greatest utility; and, secondly, because in the men that we have heard about flower-beds and shrubbery, we have heard but little as to the kitchen garden, and the means for keeping up a supply in all departments.

The new kitchen garden, in contradistinction to the old one, is about twelve acres in extent, and about five of these are inside the substantial walls. The vegetables seemed to have suffered but little from the drought we experienced farther south, partly, no doubt, owing to the abundance of the water supply. The great proportion of the trees against the walls had been lifted the previous season and replanted, after placing a quantity of good turfy soil beneath each tree. Espaliers and dwarf standards by the sides of walks had been treated in the same way, and with the best results. Large quarters were in course of preparation for Strawberry planting, and in several open spaces between pits and houses, where unobstructed sunlight could be obtained, were some four thousand pots of Strawberries for forcing, mostly in six and seven-inch pots, very strong, and ripening their buds well. There were some Black Prince and Queens for early work, and Queens for late produce, but the great bulk of the plants were Sir Charles Napier and Osburn, and of these latter Mr. Craw spoke highly for quality and produce. Outside, besides many flowering plants to be forced, we noticed a great quantity of compact plants studded with flower-buds of the Azalea anemone, which Mr. Craw stated forced beautifully.

To insure something like variety, we shall now take a walk through the different structures, beginning at the north side of the garden.

Outside of the walls, besides soil, composts, &c., neatly kept, carpenter's workshop, pot bins, &c., is a cucumber-house, 60 feet long, 11 feet wide, and 9 feet to the apex, with a short hip from the back wall, and 3 feet in front, walk along the back, bed heated below in front, ventilation at top by raising a short sash on south side by a lever. In front of these were two pits, glass covered, for various purposes, each 60 feet in length, and two open brick pits, filled with Roses and other things for forcing, and a great number of *Lilium giganteum*, ripening their large crowns, the older leaves hanging in a drooping, withering condition over the sides of the large pots. Most of these had been grown from sucker offsets. Several plants that had bloomed showed the mark of the thick stems they had produced. Such plants must make a grand appearance in the large conservatory. Rich treatment, and large bud-pots, seemed to be the secret of their successful cultivation, along with the ripening and resting process given to them in the autumn.

These low, open brick-pits are a march in the right direction, as showing a certain amount of care and protection given to the plants placed in them, and doing away with the want of order and neatness, which is apt to prevail when plants in pots stand here, there, and everywhere.

We next come to the principal range of lean-to forcing-houses, backed by their appropriate open and close sheds, for keeping composts and potting, stockholes, &c. At present there are a number of furnaces, but it is intended ultimately to heat the whole by means of three boilers, unite the flues from these into one below ground, and raise a chimney for them among a dense mass of trees, so that the garden shall

be free from smoke. One of these boilers, a tubular one by Mr. Gray, has already been put down, with a merely temporary chimney, and Mr. Craw spoke very highly of the manner in which it did a great amount of work very efficiently.

In these back sheds there was one feature well worthy of note. In a corner was a small open boiler like a wash-house one, steaming away with *manure water*. This simple appendage furnishes at all times two great advantages. The operator is enabled to give water to his plants of the desirable temperature, and then whatever the manure used, be it horse, cow, sheep, deer, or other droppings, liquid manure from the farm, &c., boiling the water and material before diluting it prevents the possibility of the eggs of insects being thus communicated to the soil.

We turn in to the front of these sheds, and commencing at the east end we enter an early vinery 40 feet long, 14 feet wide, 14 feet in height at back, and 3 feet in front. The Vines were pruned and cleaned, planted inside on a raised border, with arches in the front wall, and heated by pipes below in a chamber covered with stout slate, on which some rubble and then the soil were placed. The pipes were close to the front and the back wall, a small ledgewall bounding the path from the bed, and the Vines were planted inside of the front pipes. This seemed a very excellent house.

Next we come to two narrow late Fig-houses, with upright front glass, in the Trencham style, with Figs against the back wall, and a trellis stage in front for Strawberries, and other plants, the platform being sufficiently low not to shade the Figs on the back wall. In our younger days it was thought advisable to cover shaded back walls with Figs, because they would grow there, and so they would, but would they continue to yield fruit?

We now come to the Black Hamburgh-house, where the wood was ripening nicely, the Vines planted also in a raised bed, but not heated below; and next we pass through a Muscat-house looking well. Then we enter a mixed house of Hamburgs, Lady Downes', and Buckland Sweetwater, the latter very fine. It is intended to make this house into a late one, by taking strong canes of Lady Downes' along the front of the house, and inarching these on the other Vines, especially the Hamburgs.

We then pass into a West's St. Peter's-house, but as his lordship is very partial to the Muscat Hamburgh, it is proposed either to remove the West's St. Peter's, and plant with the desired kind, or inarch the Muscats on the present stocks, the choosing which must depend chiefly on the state of the present border. We then go through two narrow Fig-houses that have yielded their crop, the trees showing fine, short, stubby wood, and enter a vinery with raised bed inside, planted this summer outside border still to make as needed, and the Vines doing well—border on raised platform with hot-water pipes below to be used when needed, and some White Frontignans planted against the back wall, to be kept in bearing until the front Vines fill the house. The Vines in front are planted twice as thickly as they are intended to remain, for every alternate cane will be cut down and treated to secure strength for permanent cropping. The other Vines will be cropped until the permanent ones are fully established, and will then be cut out, and the house given up to the latter.

Our recollection of the rest of the village of houses and pits is more confused, as lean-to's, hipped-roofed, and span-roofed houses are more mingled. We will instance the following, beginning at the west end and going eastward. First, a large span-roofed Orchid-house, with two divisions, one for species from a cooler climate, and another for those from warmer latitudes. In the former, were many fine Caladiums, and fine-foliaged plants, and huge masses of *Phaius grandifolius*, the *Bletia Tankervilleae* of our young days, which from the round full appearance of the large bulb-like crowns told of the brilliancy they would present with their spikes of flowers in winter and spring. In the warmer division, *Nymphaea corulea*, and others, were blooming freely in a tank in the centre bed, scenting the house with their rich perfume. On the bed were several fine plants of the *Peristeria elata* (the Dove Plant) in bloom. In baskets suspended from the roof were huge masses of *Dendrobium moschatum*, *latifolium*, and *Pierardi*, whilst every open space was draped with pendent shoots of the rich-foliaged *Cissus discolor*. One of the distinctive features of this house, however, was a sort of

wide tank-shelf along the front and ends of the house, formed of slate, with an iron ledge screed on so as to be water-tight. Here all the more valuable and more tender plants were situated, raised as deemed necessary above the water on the shelf. There is a tap at one end for draining the water off when deemed necessary, and replacing with fresh. The water not only keeps a moist atmosphere about the plants, but prevents most sorts of insects from getting either on the plants, or among the soil or sphagnum in which they grow.

Leaving these we enter a span-roofed house, 14 feet wide; height to apex, 9 feet; height in front, 4 feet, with pathway down the middle, and a raised bed on each side, heated below, and also heated above, and now filled with the best Tea Roses in pots, to yield flowers all the winter and spring—ventilation by moving short sashes by a lever on the south side of the ridge. Next we pass a large pit filled with cuttings of Geraniums in boxes—the cuttings small, showing that Mr. Craw was anxious not to spoil the outline of his beds—and come to a large hipped-roofed house, with raised bed in the centre, heated beneath, and pipes, exposed at sides, back and front, for forcing all sorts of things for the large conservatory. This house had a large cistern at one end, with hot-water pipes passing through it, so as always to secure plenty of hot water for use. Then we come to a large Pine pit of the old-fashioned kind, with a raised platform outside against the back wall for walking along, moving the sashes, &c. The Pines were very strong, and showing and swelling handsome fruit of Queens, Provences, &c. Then at right angles stands a span-roofed New Island house, from 50 to 60 feet long, and 24 feet in width, and containing many fine specimens. Again: in different ranges, we have a Geranium-house, 50 feet long, with a curvilinear hipped-roofed on the north side, a sloping roof in front, a walk in the middle, and a bed of earth on each side, and bed chiefly for forcing kinds; then a propagating-house, much in the style of the Rose-house, 11 feet wide, 8 feet high to ridge, 4 feet at sides, ventilation at top between double ridge-board, path down the centre, bed on each side, and each heated by pipes beneath the bed; and again we find a hipped span-roofed house for early Muscats, length 27 feet, height to apex 15 feet, height in front 3½ feet, width 18 feet, with soil-bed supported on arches, and heated below as we as above. The Vines were looking well, and had been planted nearly two years,

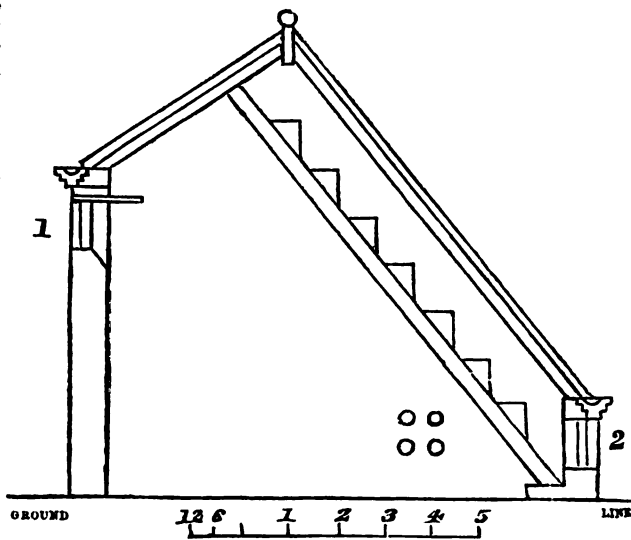


Fig. 1.

Many of these houses seemed so particularly suitable for the purpose contemplated, that we would have given sections of some of them, but for taking up room, and also because we think that from the dimensions given these sections may be made for themselves by any desirous of having them. We cannot help, however, giving the sections of two houses which seemed particularly well suited for the object aimed at.

The first is a Strawberry-house (fig. 1), 45½ feet in length, between 9 and 10 feet in width, inside measure, height to apex 10 feet, height in front 3 feet. 1 and 2 are wooden ventilators at back and front, hung by pivots in the centre. The diagonal pieces of wood supporting the shelves are as far apart as such supports for stages generally are, so that there is ample room for getting at these seven shelves easily from the inside of the house. It will be observed that all these shelves are at an equal distance from the glass, and that the slope of the glass is such as to give the greatest

amount of the direct rays of the sun to the plants beneath it during the early months of the year, when forced Strawberries are most in demand. We could well believe the statement of the wonderful crops obtained in this house, and from such plants in pots as we noticed ripening their crowns. We have seen no other house so suitable for the object, and can well imagine it would be free from the annoyances and insects that are apt to seize on the Strawberry when the plants are crowded into any and every open space in any house where there is heat. All who have the am-

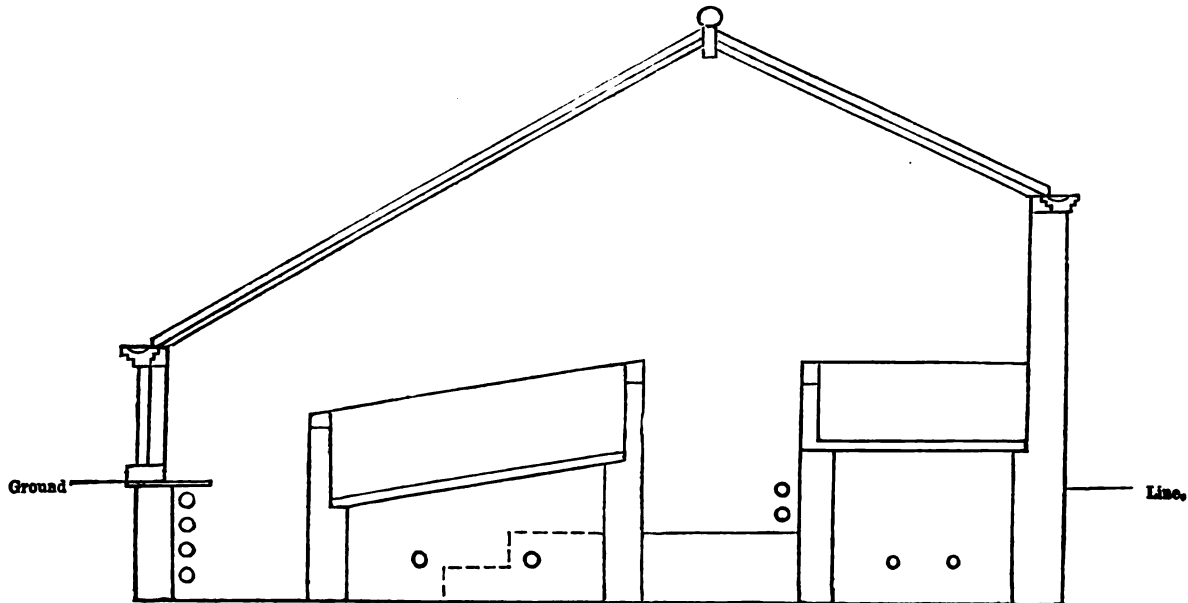


Fig. 2.

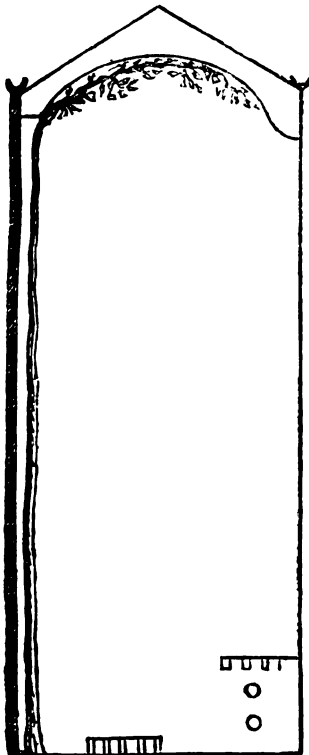


Fig. 3.

bition to keep everything and every structure to its right use, will thank us for this section of the Strawberry-house at Enville.

The other house is the principal Pine-stove, a cross section of which on the same scale as the preceding is given in fig. 2. The length of this house is 50 feet; width inside, 17 feet; height to apex from path, 10 feet; height in front above ground level, nearly 3 feet. The central path is sunk about 1 foot below the ground level, the front path 3 feet. There is a narrow bed at back, a wider bed in the middle, and a broad slate shelf above the hot-water pipes in front, forming a most valuable position for Dwarf Kidney Beans in winter. The beds are separately heated by hot water in a chamber beneath them, the top of the chamber being covered by strong slate. In this and other Pine-beds wood had been used for covering the chamber, with openings to let up the heat; but when the plants were

turned out, there was ever and anon the bother of a piece of wood giving way and letting a part of the bed down.

No doubt slate is much the best every way when the first expense can be comfortably incurred. The plants in these beds were all turned out into rough fibry soil, and showed by their stubby sturdy habit and the dark green of their foliage that they were receiving the treatment they required. Whilst passing through, the beds were being watered with rich manure water, nicely heated, that came from the open boiler to which we have already adverted; and the rough openness of the soil and perfect drainage would enable such enriching water to be given oftener, not only with impunity but with great advantage to the plants.

In front of all these houses, again, were three ranges of pits, each 170 feet in length—the first called the Melon range; the second used for propagating and keeping bedding plants, &c.; and a third, a low range without glass, formed of brick ends and sides, and a four-inch wall from back to front every 4 feet apart. This cross wall not only acts as a support to any cloth covering that may be used, but divides the whole length into so many separate divisions—a good plan for keeping each sort of plant placed there separate and distinct from its neighbour. On unrolling the frigidomo cloth on the morning of our visit to let the bright sun in, we found the whole of these open pits filled with Cloth of Gold, Golden Chain, Alma, Earl of Stamford, Little David, Pearl, and other Geraniums. The cuttings, having been pricked out into nice sandy soil, were rooting nicely, and would be raised and potted and kept in any place where room could be had during the winter. The sight of these pits without glass and with glass began to give us an idea whence would come the more than 100,000 plants that last season were used for planting in the pleasure grounds.

After admiring some Calceolarias in the borders, as Prince of Hesse (a fine deep crimson), Magnificent (a good brown), Tom Thumb, and some others raised by Mr. Watson, of St. Albans, we reached the south front of the middle wall of the garden. This wall is fronted with a beautiful, upright case, after the Trentham style, for Peaches, as only a part of the east end is devoted to Cherries, looking as if they would produce heavily. This case (see fig. 3) is altogether 360 feet

in length, 5½ feet in width, back wall 14 feet in height, front glass the same height; height to apex of span-roof from ground, 16 feet. Every 20 feet along the back wall is a neat trellis about a foot in width, and which is continued in an arch over the pathway, from wall to glass, for growing on, and fastening to it Tea Roses, which are great favourites of his lordship, and many of which were beautifully in bloom in the beginning of October. Instead of the upright trees in front, as at Trentham, there is a latticed stage or shelf over the pipes, which Mr. Craw considers much preferable, as giving unobstructed light to the back wall, whilst these shelves are admirable places for fruiting great quantities of Strawberries in pots, and for keeping lots of other things in pots that are low in growth. The great height gives these cases an imposing appearance, and the whole is well finished; the large lights slide freely past each other, a stout plate of iron forming the ground sill all the way. The trees seemed in excellent condition. Part of the hipped-roof is opened for ventilation by lever power.

The west wall, or what we may call such for convenience, is covered with young, thriving trees of Apricots and Peaches, and the border is fronted with a broad gravel walk, at each end of which it is proposed to erect a summer-house, from which fine views may be obtained southward over the picturesque race course, and westward over the cricket ground, which must have a striking effect on a playing day, when enlivened by numbers of showy tents, flags and banners of all colours, plenty of music, and thousands of people criticising the sport, and so far making each splendid hit and run their own.

Part of the ground between this walk and the cricket ground is devoted to an orchard, and on the north side of it is placed the old conservatory, which was not considered good enough to grace the pleasure grounds. It is, however, a beautiful low structure, with ridge-and-furrow-roof, 140 ft. long, and 24 feet in width, divided into five or six houses, and heated to suit either stove or greenhouse plants. In it we found nice young plants of Camellias, Oranges, &c., and in one house a great many nice plants of *Humea elegans*, of which a great number is wanted every season. In the same house was also a number of very large pots, some 18 inches in diameter, with the different *Tropæolums*, as *tricolorum*, *Jarrattii*, &c., growing in them. Several tubers were placed in each pot, this being about three parts full with soil, and as the shoots grew the earthing-up to the surface would be given gradually. Most of these would have the top of a young tree fastened in the pot, over which the branches would wind and clamber, and thus become fine objects for the large conservatory.

Next the gravel in front of this conservatory is an oblong square, devoted now to beds of flowers, but next season this space will be occupied by a geometric flower garden; and backed as it will be from the orchard by a hedge of Box, it will, we have no doubt, form a striking feature in these gardens, and the more especially as, notwithstanding the quantities of flowering plants used, there is nothing as yet of the regular or geometric in the vast pleasure grounds. Mr. Craw kindly showed us a plan of this new regular garden coloured, &c., and we have no doubt it will be a gem. It consists of a centre and a wing on each side in the broken chain style. The centre alone would make a neat garden, and as such we believe was sent some years ago by Mr. Craw from Ayrshire to the Horticultural Journal. We have, as far as we recollect, a promise that it will be again given in its extended form with the planting, and our readers will then judge if we have said more than sufficient of its elegance and its fitness for the position.

At the back of this conservatory three elegant rooms have been erected; the central one to be used by the family and friends as a resting and retiring-room when visiting the kitchen gardens, and the rooms on each side to be used as fruit-rooms. The walls are built hollow, air admitted at the bottom of the walls and in the roof; roof either double, or the ceiling well covered above with sawdust. The elegant windows and shelves for fruit are stained vainscent colour. The windows are furnished with blinds and shutters, to be used according to the weather. The shelves on three sides of the room are fitted up with slits of wood some 2½ inches wide, with half-inch openings between, and the outside ledge is about 2½ inches high. A table with drawers is yet to be placed in the centre of each room; and we will say no more

of them now, as we have the promise that a plan, with accompanying details, will be sent when all is finished. But there is one little thing we must notice, but which only seems little after we have seen it in operation, and so simple is it and useful that the wonder is that it has not been generally adopted long ago; so true is it that everything seems simple when it is understood and practised. The simple unique contrivance is this: Along each of these outside ledges a small strained galvanised wire is fixed, and opposite every kind of fruit the name is clearly written on a card label, which is then tied by a thread to the wire. As the fruit is changed the label is changed. This is far superior to laying labels on the fruit, or tacking them on the sides, and thus disfiguring them.—R. FISH.

(To be continued.)

WORK FOR THE WEEK.

KITCHEN GARDEN.

If any esculent roots remain in the ground they should be taken up immediately. Dress Asparagus-beds; manure, ridge, and trench all vacant ground, first making arrangements as to what spring crops it is intended for. Cabbage, earth-up those planted for Coleworts for winter and early spring use. Look over the principal plantations frequently to see if the slugs attack the plants. If they are numerous lay a quantity of Cabbage leaves on the ground and examine these daily. A pail of hot water or some lime may be taken round at the time they are examined, and the slugs shaken into it. By this simple method many thousands may be destroyed at this time of year. *Cauliflowers*, lose no time in tidying up those nearly fit for use, lay them in a frame, so as not to touch each other, and keep them free from dead and decaying leaves. *Culinary*, earth-up that intended for winter use to a good height as soon as the soil becomes a little dry. It will be necessary to attend to this as early as an opportunity offers, as the frost may set in shortly, which, from the weather preventing earthing-up lately will do it much mischief. *Radishes*, continue to blanch it by tying up or wrapping the leaves together and laying two flat tiles on each plant, so as to form a slight ridge, one tile overlapping the other. *Lettuces*, pay the same attention to the autumn plantations that was recommended for the Cabbages. Give air freely to the young plants in frames. The Cabbage *Lettuces* in frames for winter use will not require much air. *Peas*, a few, and also Broad Beans, may be sown on a dry, warm border. Some cover them with cinerula ashes, but we have several times seen them go off in the spring, and have been fully satisfied that the ashes were the cause of their doing so.

FRUIT GARDEN.

Let there be no lack of attention in the fruit-room at present, for fruit requires more care during the first few weeks after gathering, than all the season afterwards. Give just sufficient air to carry off damp, but nothing more, as allowing dry winds to blow over the fruit would only cause shrivelling. Strawberries for early forcing should be placed where they can be protected from drenching rains, a cold frame or pit, where either can be spared, would be the best situation for them, but the lights should not be put on except in case of rain or frost. Indeed, the whole stock in pots for forcing would be benefited by being placed where it could be guarded from heavy rains. If any transplanting or root-pruning of fruit trees has to be done, let this be attended to as soon as the leaves are off, and see that trees exposed are securely staked before leaving them. Also, prepare the ground for fresh plantations, and plant the trees as soon as convenient. Take every opportunity of pushing forward pruning and nailing.

FLOWER GARDEN.

Those who propose making additions to their collection of Roses, should do so at once, as there will be a better chance of obtaining good plants now than after the nursery stock has been repeatedly picked. The present season is also very favourable for planting all but tender sorts, which had better be kept under glass until next May; but those should be procured at once, and if they can be placed in a gentle heat through the winter, they will grow freely and furnish cuttings which will root just as freely as *Verbenas*. In pre-

paring ground for Roses let it be trenched at least 2 feet deep, and well incorporate a very heavy dressing of manure with the soil to the full depth. It is hardly possible to make the soil too rich for any kind of Rose, particularly the autumn-blooming kinds, and 4 or 6 inches of good rotten farmyard dung will not be too much where the soil is naturally poor and light. Large-headed standards that have done blooming for the season should be cut back pretty freely to lessen the chance of their being injured by heavy gales of wind. Continue to clear the beds of their summer occupants as these become unsightly, and after trenching or doing whatever can be done to save time at next planting-out season, get them furnished for the spring. Look over the herbaceous-borders and make any projected alterations there, taking up and dividing any of the coarse-growing plants that may be inclined to encroach too much upon their neighbours. Roll and cleanse lawns from worm-casts; lime water may be employed to destroy worms if too numerous. Transplant Sweet Williams and single Wallflowers into beds or borders, to replace the gay but tender beauties which fade on the approach of winter. Plant baibs and examine those previously set. Mice are particularly prone to destroy them.

GREENHOUSE AND CONSERVATORY.

Take advantage of unfavourable weather for outdoor-work to get the foliage of Camellias, Orange trees, &c., thoroughly cleaned, for it is hardly less essential to the health of such things that their foliage be kept clean and in a fit state to perform its functions, than that their roots be kept in a healthy active condition. Look over the plants frequently, and examine those liable to suffer from mildew and damp, such as *Leschenaultias*, *Boronias*, &c., for a short neglect will sometimes result in the disfigurement of a promising plant. The *Boronias*, *Leschenaultias*, *Gompholobiums*, &c., are very impatient of exposure to cold drying winds. Keep *Cinerarias* and other softwooded stock clear of green fly, and endeavour to secure stocky plants by affording them sufficient pot room, and admitting air freely whenever the weather permits. *Cinerarias* are rather liable to be attacked by mildew at this season, and if this enemy makes its appearance apply sulphur immediately it is perceived. In most places *Chrysanthemums* will be the chief feature of attraction at present, and where these are largely grown they make a fine display, and are worthy of every necessary attention to preserve them in beauty as long as possible. They are very impatient of a close rather warm atmosphere, and if the house contains plants requiring this treatment the *Chrysanthemums* should, as far as practicable, be placed in the coolest part where air can be given freely at every favourable opportunity; for, unless they can be rather freely exposed to air, their foliage is soon attacked and disfigured by mildew, especially if the plants are bushy and well grown.

PITS AND FRAMES.

All flower-garden plants, such as *Petunias*, *Verbenas*, *Calceolarias*, &c., intended to be wintered in cold frames or pits should now have strict attention. Let their supply of water be limited to that quantity only which is requisite to keep them from flagging, and let them be frequently gone over, and all dead or decaying leaves immediately removed. Give them all the air possible during the day, if dry, and shut up tolerably early in the afternoon. Finish potting Dutch bulbs. Pot *Rhododendrons*, hardy *Azaleas*, *Kalmias*, *Lily of the Valley*, and all other plants usually required for winter forcing.—W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

On Saturday and Sunday week we caught the leaveings of the storm that produced such havoc in Yorkshire and elsewhere. On Thursday last we had a day of almost continuous rain, which will do much good. Before it came we managed to earth-up the most of our Celery, among which, notwithstanding the drought, we have not yet seen a run head, thanks to our shading with evergreen boughs when we could give no water.

Notwithstanding our hoeing, we find the mild dripping weather is causing numbers of small weeds to show themselves among Spinach, young Onions, Cabbages, &c., and

the first dry day will be chosen to run the Dutch hoe among these crops again. It is wonderful how soon weeds come, even after great care has been taken to keep them away, and prevent any ripening their seeds. Well might some otherwise clever people adopt the theory of spontaneous generation, not only as respects these little weeds, but also as respects insects and other vermin, so annoying to the gardener. We believe that a single brown beetle, such as those that annoyed us last year, left alone during the winter, or any of its eggs untouched, would, by oval and viviparous generations, have millions of progeny before the end of the summer. We just as firmly believe if a fine plant of Chickweed, or of Groundsel, be allowed to ripen and scatter its seeds, and these seeds be turned down into the earth, so great is the vitality of the seeds, that enough of them may be brought within the vivifying influences of the atmosphere at every turning up of the soil, to give employment in hoe and hand-weeding for more than a generation of men. In our own case we ascribe the frequency of these weeds, notwithstanding the attempts to keep them from seeding, to the necessity of using anything we can procure from the sides of a small part of the highway, using leaf mould as almost our only manure, and raking the leaves where there is a likelihood of often having a fair allowance of seed weeds. Annual weeds alone will ever prevent the occupation of a gardener being a sinecure.

For vegetables in general, see previous weeks, if the weather will permit of the operations being performed. There have been few attacks on young Cabbages and Cauliflowers by grubs since we scattered a little tar on the surface of the ground, and watered them from a pool the sides of which we had plastered with tar; this, therefore, so far tainted the rain water that subsequently fell, but not so much as to do any harm to such plants out of doors. Gathered seed of Asparagus for sowing, then cut down the heads with an old scythe, and will clean and dress the ground as soon as possible. We always believe that this vegetable delights in rich treatment in summer when growing, more than when it is comparatively dormant in winter. Looked over Potatoes, Carrots, Onions, &c., and placed some of the winter Onions in the ground in a sheltered place to supply Scallions in hard weather in winter, and in an emergency to be stripped small for salading.

FRUIT GARDEN.

Here we did little else than protect Strawberries in pots from heavy rains. Took advantage of the muggy, drizzling weather to smoke Peach-house, early vinery, and orchard-house, with bruised Laurel leaves, and a lot of tops of green Capsicums, chiefly as a measure of prevention. A solitary fly or two were discovered before the smoking, but they were dried up to mummies the next morning. We might have liked the tobacco smoke better, reaching into every cranny, of stem and wall; but then to produce and keep such a dense cloud in large houses for some eighteen hours, would have cost much, whilst the laurel-leaves cost nothing but the bruising. Care was taken that no flame should appear, and we have observed no green leaf suffer, though in some places the fumes had been so strong as to form a dark prussiate of lead on the painted rafters. It is of no use to attempt to wash off that dark colour, but left to itself, and with air on the house, it will gradually become of the original colour. Advantage was taken of the wet to shift a few fruit trees in small pots into larger ones, and to top-dress others after picking out some 1 or 2 inches of surface soil. If we could, we would have done this work three weeks ago. As soon as the leaves fall more, we will place all such plants closer together that we may find more room for beds of Strawberries under cover, Lettuces, Cauliflowers, &c. Commenced washing Vines in first house with hot soap water after the above smoking. Washing also the glass, wood-work, stages, walls, preparatory to lime and sulphur white-washing the latter, and cleaning the house thoroughly before filling it with plants, which will remain until the necessary heat for forcing the Vines is too much for them, when they must be removed. We would have used a little sulphur in smoking this house before washing, as the wood is hard, but we were afraid that some of the fumes might find their way into the next house, where they would have done injury. Our Vine-borders are still unprotected, for they were so dry that a little moisture would do them good.

rather than otherwise. Wooden or asphalt coverings are capital things for keeping the borders in a right state as to heat and dryness.

After this rain preparations should be made for planting, replanting, and root-pruning fruit trees, according as their circumstances may require. Many kinds of fruit liable to have the wood cankered and spongy, will be kept healthy and well ripened if the trees are lifted and replanted every two or three years. These when surface-mulched and replanted in good time in the autumn will scarcely feel the effects of the moving more than their making for some time less vigorous wood, which will, consequently, be better ripened, and more furnished with fruit-buds. For all small gardens especially, these stunted but yet healthy and fruitful trees are the things to be aimed at, so that you can walk about the tree, and do to it everything it needs on *terra firma*, and require no long dangerous ladders on which to mount and lean to some tempting branch until ladder and you come to grief.

There is with hardier trees often two ways of attaining the same result. You may wish to fill a certain space with wood quickly, and not mind sacrificing fruit at first to growth. In that case you may encourage rather strong growth, and then, when the space is nearly filled, relift and plant or root-prune carefully in September, and if you have a fine autumn you will most likely have a preponderance of fruit over growth for some years afterwards.

ORNAMENTAL DEPARTMENT.

As soon as the ground is moist enough, all sorts of shrubs, and evergreens especially, should be planted or replanted. If the ground is still dry the holes may be opened, and thus the exposed soil will be ameliorated, and any stopping or pruning that the head requires should be given though it would have been better if that had been done a month ago, or more, as was previously alluded to. Any shrubs or trees deemed rather tender for the climate, should be planted on knolls, so that the more limited growth in consequence may be better consolidated. The stronger Roses may be at least partially pruned, to prevent the winds swaying them so as to affect the roots. Tender Teas, &c., in beds, in cold places, may as well be taken up and put in thickly by the heels in a sheltered place, or under a shed with some hay or fern ready at hand to place among the branches, if severe frost should come suddenly.

Laying turf may be proceeded with as soon as the turf is damped sufficiently to render watering unnecessary. This is better done now than in spring, chiefly for three reasons—first, it is more pleasant to do the work, and there is more time generally to spare for the doing it, and it will be well consolidated and levelled before spring, and want thus scarcely any attention then, which it will do if deferred until March or so, and the weather should prove dry and parching.

We have frequently known old pasture because not level enough for a lawn, dug or trenched down to admit of the ground being levelled, and then great trouble and expense incurred to obtain what was considered good turf from the sides of some country road, though most likely well-stored with the little plants and the seeds of Daisies, Plantains, &c. A better plan in most cases would be to roll the rough pasture, mow it close, and sweep it hard, and then take up and replace again as you level, and if you think proper, scatter a little Dutch Clover and a few fine Bents over the turf before you finally roll it down.

We have at last taken up some Cloth of Gold, Golden Chain, Alma, and other Geraniums, and in taking them up the secret was disclosed how they stood so well with us in this dry season when we had no water to give them. We traced the roots of many fully 3 feet down. Could the Calceolaria be induced to send its roots down like the Geranium, it, too, would stand the dry weather better. That we got on as we did in such a season we have no doubt, as we previously stated, was owing to the deep stirring of the ground. We found Geranium roots much deeper than the above, but we question if they would thus have found their way down so easily, if there had been a hard pan some 12 inches from the surface, that no utensil or pointed lever-power had ever broken up. Just before the wet we also managed to go over a great quantity of small cuttings in pots and boxes, stirring up the surface soil with a pointed stick, and in many instances removing a portion where there was the least sign

of damp or fungus, and replacing with a sprinkling of fresh loam, rendered light by drift sand and charcoal dust. We shall be anxious to keep these as much as we can under protection out of doors as long as possible, instead of cramming fruit-houses at once. Will also take care that no plants or boxes of plants are housed for the winter until satisfied of their being free from all kinds of insects, as it is of little use cleaning houses as a preventive of evil, and then let the evil enter with our own consent.

As stated some weeks ago, Auriculas, Polyanthus, Carnations, and the more tender alpine, should now be protected from soaking rains, and whenever frost is feared earth should be piled several inches high round the stems of Dahlias to prevent the buds being affected. Gave all the air possible to Chinese Primroses, Violets, Mignonette, Cinerarias, &c. Tree or pyramidal plants of Mignonette, the best of all for winter cutting, should be kept in rather a dry atmosphere. Brought on forcing plants very gradually, and lessened the bulk of the climbers in greenhouse and conservatory to give more light to the plants beneath. Washed off the rough of the shading that had been given to such houses and pits and frames in summer, to lessen evaporation when we were so short of water. Gave all the light and air possible to stove plants to firm their growth, and helped them also in damp weather with a brisk fire for two or three hours during the day.

Charring.—From the most unpromising rubbish we obtained a load or two of small charred material, and the remainder, being more twigs with leaves than anything else, we will burn, and with it a great lot of earth and weeds; the produce will lighten parts of our heavy land.

Getting up some turf for future composts from a paddock where a road is to be formed, and the sides planted, has occupied, and will occupy, a good deal of time. We allowed the material to be slightly damped, and then commenced building it in stacks 4 feet wide. By next summer it will be good stuff.—R. F.

COVENT GARDEN MARKET.—OCTOBER 29.

We have nothing fresh to report. Grapes continue plentiful, and Pines are still scarce; in Apples and Pears the kinds remain the same, and the supply is heavy. Large importations of foreign Grapes are still arriving, also Oranges of the new crop, but the latter not in bulk as yet. Of Potatoes the consignments are very heavy.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples..... $\frac{1}{2}$ sieve	1	0	2	0	Welons.....each	1	6	4	0
Apricots.....doz.	0	0	0	0	Mulberries....punnet	0	0	0	0
Cherries.....lb.	0	0	0	0	Nectarines.....doz.	0	0	0	0
Chestnuts.....bush.	14	0	0	0	Oranges.....100	10	0	14	0
Currants, Red..... $\frac{1}{2}$ sieve	0	0	0	0	Peaches.....doz.	4	0	10	0
Black.....do.	0	0	0	0	Pears (kitchen).....bush.	5	0	10	0
Figs.....doz.	0	0	0	0	dessert.....doz.	1	0	8	0
Filberts & Nuts 100 lbs.	60	0	80	0	Pine Apples.....lb.	6	0	9	0
Cobs.....do.	70	0	80	0	Plums..... $\frac{1}{2}$ sieve	2	0	7	0
Gooseberries..... $\frac{1}{2}$ sieve	0	0	0	0	Pomegranates.....each	4	0	0	0
Grapes, Hamburgs lb.	1	6	5	0	Quinces..... $\frac{1}{2}$ sieve	2	0	4	0
Muscats.....lb.	3	0	7	0	Raspberries.....lb.	0	0	0	0
Lemons.....100	5	0	12	0	Walnuts.....bush.	14	0	20	0

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes.....each	0	4	0	6	Horseradish... bundle	2	6	5	0
Asparagus.....bundle	0	0	0	0	Leeks.....bunch	0	2	0	0
Beans Broad..... $\frac{1}{2}$ sieve	0	0	0	0	Lettuce.....score	2	0	4	0
Kidney..... $\frac{1}{2}$ sieve	3	0	4	0	Mushrooms.....pottle	1	6	2	6
Beet, Red.....doz.	1	0	3	0	Musd. & Creas, punnet	0	2	0	0
Broccoli.....bundle	1	0	1	6	Onions.....bunch	0	4	0	6
Brussels Sprouts $\frac{1}{2}$ sieve	2	6	3	6	pickling.....quart	0	6	0	8
Cabbage.....doz.	1	0	2	0	Parley.....bunches	4	0	6	0
Capsicums.....100	1	0	2	0	Parasips.....doz.	0	9	1	0
Carrots.....bunch	0	5	0	8	Peas.....quart	0	0	0	0
Cauliflower.....doz.	4	0	6	0	Potatoes.....bushel	2	6	4	0
Celery.....bundle	1	0	2	0	Radishes doz. bunches	1	0	0	0
Cucumbers.....each	0	6	1	0	Savoy.....doz.	1	0	2	6
pickling.....doz.	0	0	0	0	Sea-kale.....basket	0	0	0	0
Endive.....score	2	6	4	0	Spinach.....sieve	2	0	3	0
Fennel.....bunch	0	3	0	0	Turnips..... $\frac{1}{2}$ sieve	2	0	4	0
Garlic and Shallots, lb.	0	8	0	0	Turnips.....bunch	0	3	0	6
Herbs.....bunch	0	3	0	0	Vegetable Marrows doz.	0	0	0	0

TRADE CATALOGUE RECEIVED.

William Chater, Saffron Walden Nursery.—Catalogue of Superb Double Hollyhocks and Choice Pansies. 1864-65.

TO CORRESPONDENTS.

•• We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

SEEDLING POTATO, HAND'S FREEDOM.—This, which we noticed as exhibited at the Royal Horticultural Show, was raised by W. Hand of Newcastle-under-Lyne, Staffordshire, and not of Newcastle-on-Tyne.

LILIU LANCIPOLIUM CULTURE (F. W. B.).—These Lilliums withstand the winter when planted 6 inches below the surface in light loamy soil, but require the protection of a greenhouse or a cold frame when grown in a pot. The bulbs, when the foliage decays, should be potted in light, rich, turfy loam, with good drainage. Little water must be given during winter, but sufficient to keep the soil from becoming dust dry; and a plentiful supply should be afforded when growing. It may be grown in a pot in a cold greenhouse or frame, having abundance of light and air. The other we do not know under the name, nor are we aware of any such plant, and we have grown them all.

LILY CULTURE (Idem).—The *Jacobus Lily* (*Hippeastrum*), should be grown in a pot. The idea that it will grow with air and light, without soil, is a fallacy. Pot in strong turfy loam by February, plunge in a hotbed if at command, and water sparingly until growth commences, then water freely, and keep well supplied until the foliage attains its full size, afterwards gradually diminishing the quantity until the leaves decay, and then discontinuing watering altogether. Winter in a dry airy part of the greenhouse in the soil in which the bulbs have been grown. When the flower-scape appears, and is on the point of expanding, remove to the greenhouse, where the plant will flower finely from April to June. *Cyclamen persicum* requires a compost of turfy loam, peat, and leaf mould, in equal parts, with a free admixture of sand. It should be potted just when it commences to grow, or in September, providing efficient drainage. It should now be on a shelf near the glass in an airy part of the greenhouse, and be throwing up for bloom (our *Cyclamens* are in bloom), and should be watered, so as to keep the soil not very wet nor dry. After flowering, or in spring, remove to a cold frame, plunge in coal ashes, and after May it may be plunged out of doors, and left there until September, when it should be potted. We shall say something on the cultivation of Lilliums and *Cyclamens* shortly.

LAWN-MOWING IN WINTER — IVY UPON OAK — YEW HEDGE INJURED BY DROUGHT (An Old Subscriber).—Unless the winter prove milder than ever was known the grass will not grow much, and will not require more than one mowing after this; or the final mowing may take place when the garden is cleared of leaves, and otherwise cleaned up for the winter. After that, rolling once or twice a week in mild weather, and keeping clean of leaves, &c., will be all that is required until April, when mowing will of course be necessary. Ivy planted by an Oak will be a long time ere it will exert any great influence on the Oak; but it certainly does injure all trees to which it is allowed to cling. It smothers them. We noted that some young Oaks with Ivy growing on the stem were much smaller and weaker than those without the Ivy. The Yew hedge will right itself if left alone. All that can be done is to mulch the ground for a yard on both sides of the plants with short litter or manure, let it remain on through the winter, and in March place an inch of mould on that. Liquid manure, if given at all, should be applied at every alternate watering, and only when the plants are growing. Copious waterings in dry weather are preferable to frequent waterings with manure water.

VINE MILDEWED—PEACH TREE WORTHLESS (P. B. F.).—Something is probably wrong with the roots of the Vine. They may have penetrated into ungenial, cold, wet soil, or the soil itself may be too cold and wet. If the soil is moderately light and open, and thoroughly drained, we should think the roots all right; but if the soil is wet, and there is no drain, the mildew is probably to be ascribed to that cause. If this is the case take up the Vine, preserving all the roots possible, drain the border, and render the soil lighter by mixing with it a quantity of lime rubbish from an old building. This should be done now or in March. You will gain nothing by cutting the Vine down, nor will you have any chance of remedying the effects until the cause is removed. By replanting and bringing the roots nearer the surface the cause may probably be removed; but if the mildew occur another year dust flowers of sulphur on the parts when it first appears, being careful to dust every part affected. Disease of the wood is more apparent in the bearing of the Vine the year following, than during that in which the disease appears. It would be better to plant a young trained Peach tree in place of the worthless kind. You may cut it down, however, and bud it next summer if you choose to do so, and do not mind waiting three or four years for a crop. The Royal George is a good Peach, and so is Grosse Mignonne. Peach trees are not grafted, but budded.

SPARAXIS FAILING (R. R.).—We think the failure was to be attributed to taking up and keeping in a dry place until the time of planting, when the roots, having lost their vitality, refused to grow. This is by no means an uncommon case, but very frequent with *Tritoma aurea* and some others, which ought not to be taken out of the earth at all, except for the purpose of replanting. They should be left in the pot in the soil in which they have been growing, and, though the soil may appear dry, there is a sufficient amount of moisture present to preserve the vitality of the roots.

DAHLIAS (S. B. O.).—The varieties are far too numerous and nearly alike to enable us to tell the names from such specimens. Not one of those sent is first-class, but they are very good for border flowers.

PIT SAND FOR POTTING (J. Bryan).—We know of no better mode of testing sand, except by analysis, than to place a portion of it in water and stir it about. If it dirties the water it is not pure silicious sand, and is not to be recommended for mixing with soil. In applying silica to plants it is best afforded in fine grains of silicious sand. Pit sands of all kinds, after being washed, and freed of their earthy particles, answer the purpose of mixing with soil; but the majority are, for the most part, little more than half silicious matter, and when wet little better than masses of mud. Such are to be avoided. The best of all sands is that found in peat soil, the next is silver sand, and the next best river sand, and the latter two are the only forms of silica available for potting purposes.

ARBOR VITÆ BROWNED—BOX TREE MOVING (W. Barker).—The brownness of the *Arbor Vitæ* is probably due to the drought. If it is only browned in foliage it may probably recover; but if the wood is brown, instead of green, when cut, we advise you to root the tree up, for it is dead. Once any of the Conifer tribe become ill-looking they rarely, if ever, recover. The Box trees may be removed with a prospect of success if it can be taken up with a ball, or a mass of fibrous roots, and this may be done in April, in showery weather. You may cut it in, but it would be best to defer that until a year after removal, cutting so that some green parts would be left. You may grow the Strawberries and pyramidal Apple and Pear trees in light sandy soil by liberal dressings of well-decomposed stable manure, or, what is better, cow-dung a year old.

MANAGING FIG TREES (E. M. W.).—When the Fig trees are matted up for the winter the Figs should not be removed, except those which are nearly full-sized. These may be removed, as they seldom swell after the protection is taken off in spring, but turn yellow and fall off. Any of the size of a hazel nut should be preserved. The ends of the shoots should not be shortened either in autumn or spring; but when the protection is taken off, if the branches are nearer together than 9 inches when spread out, the old long branches with few young shoots upon them should be cut out to the bottom, so as to admit of the branches left being trained in at from 9 inches to 1 foot apart. If they make shoots a foot or more in length in a season, stop them at the fifth leaf; but if the growth do not exceed five or six leaves annually the shoots should not be stopped, but trained in at their full length. Any shoots that tend to fill the tree with wood should be cut clean out, so that air and light may be admitted to the fruit and promote the ripening of the young wood. As the trees are vigorous, we do not think an application of manure to the soil would be of any advantage, but would tend to encourage growth rather than the maturation of the fruit and wood.

ENTRANCE GATE (H. T. H.).—We cannot furnish such a plan. It would be too costly to furnish a drawing to all who require working plans.

MUSHROOMS IN LONDON CELLARS (L. T. S.).—Mushrooms may be grown in cellars more successfully, perhaps, than anywhere else. Unless the cellar reached about 55° in winter the bed would require a little protection from dry hay or something of that kind being shaken over it. In summer they do admirably in cellars, because there they are easily kept cool. They will not, however, succeed in cellars any more than anywhere else, unless the spores or spawn run in decomposing organised matter, in which the more animal droppings there are, as that of the horse, the better. Of course there is trouble in taking that material out and in. To lessen that trouble so far we have filled large pots, about 18 inches in diameter, or tubs or boxes, capable of being easily carried by one or two persons, and filled, spawned, and earthed them before taking them to the cellar, treating each one just as we would do a bed. This lessened the litter in the cellar. Treat your dung as you may, you will be apt, especially if the garden or the house is old, to take some woodlice in with it, which of course will grow bigger, and must be trapped as elsewhere. We know of no other insect that will be apt to trouble you if the droppings are well heated before being used. We have seen fine Mushrooms, Sea-kale, and Chicory, in London cellars.

CLIMBERS FOR VERANDAH TRELLIS (T. R. S.).—We have no doubt that the Roses you name will do well enough if you give the ground a good dressing of rotten dung, well incorporated with the soil, and then in summer mulched the ground over the roots with more rotten dung. No doubt your soil is too poor. If you wished a change, we have no doubt that Honey-suckles and Jasmines would do, choosing the hardiest kinds, as the hardy Chinese yellow Jasmine for winter, and the white for summer. We have no doubt, however, of the Roses, but it may be necessary to replant. Prune, and wash with Gishurst, or something of that kind, to get rid of insects and their eggs.

BLACK HAMBURG GRAPES NOT COLOURING (A Young Gardener).—We fear there is something wrong either in the border or the materials of which it is composed. Generally speaking, Grapes have coloured well this season; but you may perhaps have overcropped the Vines, or a too severe pruning of the summer wood, or its opposite by preventing light and air acting on them, may have something to do with it. Your border, which you say is 8 feet deep on a two-foot drainage, is ample enough, or perhaps a foot too deep, and we apprehend if the roots were examined they would be found near the bottom—very likely amongst the drainage and beyond the action of the atmosphere. Soil for Vine-borders ought to be open rather than rich, and when there is the happy mixture of the chemical constituents required in the food of the Vine, the latter thrives almost in spite of mismanagement. When the mixture is an artificial one there is more uncertainty. In your case we would be disposed to lift the Vines carefully and replant them in a soil more in accordance with their requirements in this country. Some articles on this subject will shortly appear in this Journal. The evil in the case of the Muscats arises from a like cause.

SOWING VARIOUS SEEDS (Mary Scott).—*Ageratum mexicanum*, *Aretotis grandiflora*, *Heliotrope*, *Portulaca*, and *Anagallis* seeds, should be sown in the first week in March, in pots of light sandy loam and leaf mould, covered lightly with roll, and placed in a gentle hotbed. Pot when large enough—two, three, or more round the side of a small pot, or the first three and last singly, according to their strength, and grow on in a greenhouse, hardening off in a cold frame. *Alyssum compactum* is a hardy plant blooming in spring, and should be sown out of doors in May. Linums are a numerous family, and you do not say which yours is, so we imagine it to be an annual that may be sown in the first week in April where it is intended to bloom, or in pots under glass in March; if a tender sort, to be planted out in May. *Sedum* may be hardy or tender, but we presume the former, to be sown out-doors in May, but it will not flower the same year. One of the seeds named we were unable to make out.

FURNISHING BOTTOM HEAT TO PINE PLANTS (St. Omer).—You are quite right as to your plan being novel; and its answering the purpose for which it is intended is a great point in its favour. We never did see any advantage in placing rubble over the pipes, knowing, as we do, that the heat rises, and warms the bed more over the pipes than elsewhere; but we do see advantage in placing the pipes in an open chamber, and covering that chamber with open slates, or slabs of stone, by which the bed above is equally heated throughout. Such is your system, only you employ wooden sleepers and drain tiles, instead of stone or slate coverings. Though there be a variation of material the system is the same.

GATHERING BRUSSELS SPROUTS (E. C.).—When the Sprouts are large enough for gathering then is the right time, and as for their being only fit to use after frost, it is like saying that summer Cabbages are not worth eating. We cut them as soon as we can, or when about the size of a tennis ball, and quite firm, for if not used they will open or become loose, and are then no better than Coleworts. Try then, and we feel sure you will like them. We have used ours since September, and like them better than anything at this season.

HEATING A CUCUMBER-PIT (J. B.).—For a pit 36 feet long, sunk below the ground level from 18 to 24 inches, width 7 feet, height at back, inside, 8 feet, and in front 6½ feet, a flow and return three-inch pipe, along the front and one end, would only do for Cucumbers planted out towards the end of April. To plant out about January you would need the double of what you have now; and to keep on in severe winters you would need a fifth pipe, if you could give no protection to the glass on very cold nights. Your tank or box over the pipes, 18 inches deep and 12 wide, will do to grow the plants in, if planted at first some 5 inches from the top, and gradually earthed-up with rich light compost. We do not think raising the pipes will give you any advantage. The top of your tank should not be less than 15 inches from the glass, and your trellis at the back wall should be fully more—say 18 inches—and that will give room for the foliage. We do not see how "taking the glass off, and the pipes away, would make a nice house." We can well fancy how, by raising the back wall 18 or 24 inches, lengthening the sashes to suit, or having an opaque part at top, where air could be given, and doubling the pipes, you might have a nice Cucumber-house.

WINTERING GERANIUMS AND FUCHSIAS (K. C.).—If the Geraniums are variegated-leaved kinds, you must not cut them in; but if Scarlets they should be cut in and diseased, if to be kept in the dark (in that case cutting in but little); but have the leaves left on if they have light. Give only a little water to prevent the plants drying up, but afford air and plenty of light if exposed to it at all. Little if any water will be needed before March, but if the soil is very dry, a little should be given on the morning of a fine day when it is likely to be dried up before night. Fuchsias should not have any water from this time until March when they may be cut in, and watered a little at first, increasing the quantity as the plants advance in growth, repotting them when the shoots are 1 or 2 inches long. If the situation in which they are kept during the winter is very dry the soil may become too dry, they should therefore be examined, and a little water given if the shoots show a tendency to shrivel. Fritzi domo is a good material for keeping out frost, and so is stout canvass, but the first is to be preferred.

CONSERVATORY STAGE (A Subscriber).—If you have glass for half your height in front, why not have a low stage all round, and the walk up the centre? or even if you had a flat stage of 2½ feet in front, and a raised stage of 4½ feet for back at back, you would get at your plants with greater ease than on the broad stage you propose. The number of shelves must be determined by the size of the plants. For small plants the shelves may be only 6 or 9 inches below each other. For large plants they might need three or four times that space. If you have no glass in front of your house your proposed plan will do.

CAMELLIA BUDS FALLING (Perplexed).—There is nothing noxious in the water. Sudden transition from moist air to dry air and more heat is a probable cause of the buds falling. The cause of the plants in theinery not dropping their buds is probably due to the greater moisture, and cooler and more shaded state of that structure. Another very likely cause is the conservatory being badly ventilated, as Fuchsias, Citrons, &c., have not done well in it. Was the house painted? If so the plants were probably put in before the fumes of the paint had gone off. Perhaps the plants have not been kept well supplied with moisture, or watering may have been overdone, either of which conditions will cause the buds to fall. You should have thinned the buds to at most two on a shoot. The enormous quantity borne at the point of the shoots, judging by that sent, is more than any plant can swell, support, and properly expand. Then the Citron leaves are infested with brown scale, which you will find on looking at the under side next the midrib, and the insect would be better removed with a sponge and a solution of soft soap, not too powerful. That, however, has nothing or but little to do with the leaves falling, and that, we think, is due to one or other of the causes named; the buds sent have been defective some time, especially the small ones.

VINE ROOTS IN OLD TAN (A Reader).—We would remove the tan now, and replace it by turves cut 2 or 3 inches thick from a pasture where the soil is of a light leamy nature, being careful not to injure the Vine roots in removing the tan; and in placing the turves, which are all the better if from three to six months old, lay the roots in them, covering about 6 inches deep. You will find this much better than tan for Vine roots to ramify through, and it will be a new source of strength to the Vines. We have in the press a work on Vine culture, which will treat fully on the subject.

PRESERVING CUCUMBER POLLEN.—ECHIUM CANDICANS (October).—We do not perceive what is wanted with the pollen for winter impregnation, as Cucumbers swell their fruit as well unimpregnated as impregnated, and are much better for use as they are without seeds. We never experienced any deficiency of male blooms in winter, it might be because we took off all we could put our hands on, yet we always have more than we want, and that is none. You may keep the male blooms in a closely-stoppered phial, putting them therein when the pollen is ready for shedding, or you may collect some of the pollen on white paper, and keep it in a sealed bottle, not to be opened except when used, but we question its utility. From your large plants of *Echium candicans* you may expect some handsome blue flowers in May or June of next year, if you keep the plant in a light, airy situation in a cool greenhouse, and do not over-water them during the winter. The spike of berries sent belongs to some *Phytolacca*, probably *Phytolacca decandra* or Virginian Poke, but for certain identity, foliage and flowers should have been sent.

GRAFTING CAMELLIAS (Pond-dew).—Camellias may be so managed, as well as Orange, and any time before fresh vigorous growth takes place in the spring. In all cases, however, where the grafted plant could be placed in a moderate moist heat, there would be no necessity for leaving any part of the bottom end exposed. We have grafted even large plants of Camellias all over, watered the plant well, then laid the head down over a slight sweet hotbed, and placed a sash from a frame over it, and a mat at each side. The plant was moved once or twice to give water, before the scions commenced to grow freely. We would recommend, as a suitable Peach for your orchard-house, Walburton Admirable. Coe's Golden Drop Plum is anything but a shy bearer under glass, but it must have abundance of air when in bloom. We believe that in a house with air full on, and a little shaded in summer, so as to retard the crop, this excellent Plum might be kept almost till Christmas, and then in saccharine matter be more like a preserve than a Plum.

PLANTING A VILLAGE CHURCHYARD (Tea Rose).—But for what you say about the windows being shaded, we have no doubt the nurseryman's selection would suit you. Keeping that in view, we would be disposed to place a Chinese Arbor Vitæ in the centre, and in a circle, 6 feet from that, we would plant four Laurels (Portugals), and four Hollies, alternately with each other; and then, 4½ feet farther, presuming that the diameter of circle is about 23½ feet, we would plant a row of Laurustinus. The Portugals could be nipped-in as the Hollies grew. To make an appearance at once you might plant common Laurels, pegging them down over the ground. Is it necessary to have that circle at all? Round the sides, where there is room, we would put a plant or two of the common Yew, the Irish Yew, common Arbor Vitæ, and Cypress. A Decodur would soon want the clump for itself. If there were no circle you might have an Araucaria opposite the entrance, and a Decodur at each side, so as to avoid the windows.

NAMES OF FRUIT (J. P.).—Pears.—1, Catillac; 2, Doyenné Boussoch; 3, Chaumontel; 4, Conseiller de la Cour; 5, Vicar of Winkfield. Apples.—1, Franklin's Golden Pippin Apple; 2, Golden Russet; 3, Golden Winter Pearmain; 4, Dumelow's Seedling; 5, Lady's Finger; 6, Hollandbury. Others not recognised; and we are not sure we distinguished correctly the 6 from the 9. (W. R.).—2, Lewis' Incomparable; 3, Wiken Pippin; 4, Winter Majetting; 5, Wormsley Pippin; 6, Cathead; 7, Golden Reinette; 8, Yorkshire Greening; 9, Winter Queen; 10, Dumelow's Seedling; 11, Crimson Queen; 12, Beauty of Kent; 13, Early Nonpareil; 14, Syke House Russet. (Constant Reader, Ross).—Pears.—2, Haeon's Incomparable; 3, Passe Colmar; 4, Ghou Moreau; 5, Brown Beurré; 6, Easter Beurré. Apples.—1, Blenheim Pippin; 2, Norfolk Beaufort; 3, Dumelow's Seedling; 4, Cox's Orange Pippin; 5, Court of Wick. (M. S., Holland Road).—Your Pear is Usdale's St. Germain. (H. J. Watson).—1, Winter Pearmain; 2, Bezi de Casson, in use from November till March, ripening in succession; 3, Chaumontel. (A. H.).—Your Apple is the Golden Noble. Where numbers are omitted the fruit to which they were attached was not recognised. (J. Burnett).—1, Passe Colmar; 2, Zépion (Trégoire); 3, Joséphine de Malines. (A Young Pomologist).—Your Apples were named at page 239. We do not remember the Pears.

NAMES OF PLANTS (Dublin).—Your Fern is *Athyrium Filix-femina*. (J. Smith, Orton Hall).—1, *Asplenium adnigrum*; 2, *Asplenium trichomanes*; 3, *Polypodium Robertianum*; 4, *Polypodium dryopteris*; 5, *Polystichum aculeatum lobatum* in a young state; 6, *Polystichum lonchitis*. (Johnny Tucker).—1, *Rhipsalis crushed*—perhaps *caseyana*; 2, *Arthropodium paniculatum*; 3, *Ficus repens*; 4, *Gymnogramma tartarea*; 5, *Sorbus saxifraga*; 6, *Scissia tectida*.

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

THE ORIGIN OF BRAHMA POOTRA FOWLS.

I FEEL sure it would give much satisfaction to a large section of the poultry world, as well as to myself, if some of your correspondents who are learned in Brahmas, would be so kind as to give us some information through your columns which may tend to throw some light on the question at present so unsettled, "Are they a true breed or not?" And I hope they will accompany any communications with some reliable data on which their opinions are formed.

In your last Journal, I see you state that you consider them either a variety of the Shanghai, or a cross of the Malay, and as some maintain them to be a distinct breed, I presume we have here the three points between which opinions vary.

Having only kept them for a myself short time, I do not feel competent to form a decided opinion; but I must confess, as I kept Cochins at the same time, I could not help noticing peculiarities in their habits which disposed me to lean to the opinion that they were decidedly not Cochins. Indeed, of this I feel certain, but then it is evident those peculiarities might have been introduced by a "cross."

I am, however, disposed to think that if the breed had been obtained by crossing, they would occasionally "throw back," but I never heard of such an occurrence. Certain it is that they are a most valuable kind of poultry for all purposes, whatever be their origin; and although I do not at present keep poultry, I join with many others in regrets that such determined efforts should be made to deny them the place they deserve.—W. H. B.

[Dr. Gwynne, of Sandbach, Cheshire, was one of the first to possess this variety, and he informed us that he obtained them from Dr. Bennett, of the United States. He at

once concluded that they were either a mere variety of the Cochinchina, or a cross, "probably with the Malay." He asked for information from Dr. Bennett, but could obtain no satisfactory reply, and why he could not is fully apparent from this which we extract from an American work on poultry.

"The variety of fowl itself was the Grey Chittagong, to which allusion has already been made, and the first samples of which I obtained from 'Asa Rugg' (Dr Kerr), of Philadelphia, in 1850. Of this no one now entertains a doubt. They were the identical fowl, all over,—size, plumage and characteristics.

"But my friend the Doctor wanted to put forth something that would take better than his 'Plymouth Rocks;' and so he consulted me as to a name for a brace of grey fowls I saw in his yard. I always objected to the multiplying of titles; but he insisted, and finally entered them at our Fitchburg Depot Show as 'Burampooters,' all the way from India.

"These three fowls were bred from Asa Rugg's Grey Chittagong cock, with a yellow Shanghai hen, in Plymouth, Mass. They were an evident cross, all three of them having a top-knot! But, *n'importe*. They were then 'Burampooters.'

"Subsequently, these fowls came to be called 'Burampootras,' 'Buram Putras,' 'Brama-pooters,' 'Brahmas,' 'Brama Puters,' 'Brama Pootras,' and at last 'Brahma Pootras.' In the meantime, they were advertised to be exhibited at various fairs in different parts of the country under the above change of titles, varied in certain instances as follows: 'Burma Pooters,' 'Bahama Paduas,' 'Bohemia Prudas,' 'Bahema Padras'; and for these three last named, prizes were actually offered at a Maryland fair in 1851!"

BLACK IS WHITE.

CONTRADICTION as this may seem, it is no less strange than true, that what was black is now white. But to my story. A neighbouring farmer purchased some chickens two years ago, and among them was a single black one, which in due time became a hen, and underwent the usual cares of henhood. Now, whether these cares or female vanity, aroused by the fact of being a solitary black one among so many of various gay colours, or both, preying on a peculiarly constituted mind, produced the effect I am about to describe I must leave my readers to decide; but certain it is that after twelve months this black hen was observed to be changing her plumage, until at eighteen months old she became black and white; and the change still going on at two years old this once jet black hen, black even to her legs, became, and is now, of the purest milk-white, with legs as white as any Dorkings. The hen is now in my possession, having been kindly given to me on expressing much interest in the matter; and the above facts can be vouched for as strictly true. May I ask if such a case of washing a blackamore white has been met with before?—R. O., *Eylingham*.

[Many instances have occurred, and some have been noticed in our pages of Black Spanish hens gradually acquiring an entirely white plumage.]

TYLDESLEY AGRICULTURAL SOCIETY'S POULTRY SHOW.

THE thirty-first annual Show of the above Society was held on the 20th ult.

GAME.—First, J. Hilton, Boothstone Bridge. Second, T. Wakefield Golborne.

SPANISH.—First, W. Gregory, Atherton. Second, J. W. Speakman, Atherton.

COCHIN-CHINA.—Prize, T. Wakefield, Golborne.

DORKING.—First, S. Farrington, Astley. Second, J. Bullough, Atherton.

HAMBURGERS (Golden-pencilled).—First, J. Morris, Westleigh. Second, T. Davies, Hindley.

HAMBURGERS (Silver pencilled).—First and Second, J. Platt, Deane.

HAMBURGERS (Golden-spangled).—First, J. Walton, Hindley. Second, J. Morris, Westleigh.

HAMBURGERS (Silver-spangled).—First and Second, J. Morris, Westleigh.

Highly Commended, J. Hasington, Tyldesley.

POLAND.—First and Second, S. Farrington, Astley.

BANTAMS.—First, R. Gerrard, Atherton. Second, S. Farrington, Astley. Commended, S. Farrington.

Ducks.—First, T. Wakefield, Golborne. Second, J. Newton, Astley. Commended, J. Gregory, Hindley; J. Bullough, Atherton.

Geese.—Prize, W. Green, Little Hulton.

Mr. John Elliott, Westleigh, officiated as the Judge.

COWS ROBBED OF THEIR MILK.

You are correct in stating that the idea of hedgehogs sucking cows has long been abandoned by naturalists, the chief reason being, I believe, that the mouth of the animal is not large enough to admit the teat of the cow. The suggestion that the human hand drew the milk from your correspondent's cow is the most probable one, and she *may* have sucked herself; but I venture to suggest that a more common thing to have occurred in that way, would be that one of the cows running with her was perhaps the culprit.—W. H. B.

IS A NEW BEE BOOK WANTED?

"O, that mine adversary had written a book."—Job xxxi, v. 35.

I JOIN most cordially in the request of "R. S." Mr. Woodbury would confer an inestimable favour on the whole community, whether bee-keeping or honey-loving, by writing on a subject in which, we may say without depreciating others, he is "*facile princeps*."—A CONSTANT READER.

The request preferred by "R. S.," in page 319, seconded as it is by "A CONSTANT READER," has brought the above question very forcibly to my mind, albeit by no means for the first time, since, I may confess, that I have long contemplated such a task, and have spared neither labour nor expense in obtaining information and experience to qualify me for it.

My idea is, that the work should first appear in the columns of THE JOURNAL OF HORTICULTURE, whence it would afterwards be reprinted and offered to the bee-keeping world at a moderate price.

For upwards of six years I have been a very frequent contributor to the pages of this Journal, and I have to acknowledge with gratitude the kindly appreciation which has always been accorded me. To this correspondence I owe the commencement of many valued friendships, and am indebted to it for numberless pleasing episodes and grateful reminiscences. Whatever information I possessed has always been freely communicated to all, whilst in my turn I have derived much advantage from the interchange of ideas with others. May I venture to hope, that if it be decided that I am to write a new bee-book, it would be received by the Editors and readers of THE JOURNAL OF HORTICULTURE in as kindly and indulgent a spirit as the nearly hebdomadal contributions of—A DEVONSHIRE BEE-KEEPER.

[To this reply we give a ready insertion, and should feel that we did an injustice not only to the writer but to our readers if we did not cordially assent to the proposal. We look forward with confidence to the work as one that will be of great utility; for Mr. Woodbury possesses not only knowledge of the habits of bees and of all the literature on the subject, but a long experience in the apiary, and is fully qualified to teach how to manage them under any system, whether for amusement or profit.—Eps.]

WOODBURY FRAME-HIVES.

"A. W. B." says that the frames in his Woodbury's bar-frame-hives "got a little out of the perpendicular as soon as the bees began to work, and thus scarcely any of the combs are true, and many are joined together, so that the frames are useless." I have heard the same complaint from many bee-keepers that use these hives. In reply to his inquiry you say, that "every Woodbury frame-hive is furnished with a notched bar fitted transversely at the bottom of the hive. Each frame drops into its appropriate notch, and is in this way kept perfectly steady and perpendicular until filled with comb. When this has been accomplished the notched-bar had better be removed, as the weight of the combs renders its presence unnecessary, and it would be a hindrance to their free manipulation." With all due deference to Mr. Woodbury, the time that he removes his notched bar is the very time it is most required, as the

bees do not fill both sides of all the combs equally with honey, but sometimes put three or four times more weight of honey at one side of the comb than at the other, and the weight on the heavy side not being in the centre throws the bottom of the frame against the next comb, until the weight is balanced in the centre. The bees then have to shorten the cell that presses against the next comb. In turning the hives over to take to the moors, or for any other purpose, his bar-frames all tumble together whichever way the hive leans on its side, and so crush and kill the bees between the loaded combs. Mr. Woodbury's notched bar also rests upon the floor-board, and so prevents all the dirt being easily removed out of the hive from behind it. In my improved bar-frame hives the notched bar is fixed on the ends of the hive, and the hive can be turned over on its sides or in any other way when the cover is screwed down, and not a single bar-frame or comb can get out of its place. Many Woodbury-hives have been altered to my plan, and their owners all say it is a great improvement. It does not in the least interfere with any manipulations in taking out or putting in the frames, but rather assists the bee-master in guiding the combs exactly to their place again when put back in the hive.—WILLIAM CARR, *Clayton Bridge Apiary, Newton Heath, near Manchester.*

[The foregoing objection is wholly imaginary. When a comb of moderate thickness is fixed in its place in the centre of a bar, it is absolutely impossible so to distribute the weight of honey which it will contain as to cause its frame to deviate even in the slightest degree from the perpendicular. Whenever this occurs after a frame is filled with comb, it must be attributed to defective workmanship in the frames themselves. If a hive is to be turned on its side or inverted, the combs and frames should be secured accordingly; but we regret to learn that Woodbury-hives have been tampered with in the way described by Mr. Carr, as notched bars have not been discarded from them without sufficient reason. No frames can be readily or conveniently manipulated which have to be dropped into notches, and it makes no difference in this respect whether these be in the centre or at the ends of the frames.]

ARE BEES CARNIVOROUS?

WITHOUT wishing to give any offence, or be considered unpolite in doubting a lady's word, I cannot but think that bees do not eat meat; and I shall be glad to hear what your able correspondent, "A DEVONSHIRE BEE-KEEPER'S" opinion is on this subject, as I have so often observed when bees have been said to eat this, that, or the other that has been put into their hives, that they have only taken it out to get rid of it, as witness the grains of candied honey and undissolved sugar, &c., they bring out; but when I have a hive that I do not care for I will certainly give them some meat, and then watch them closely to see if they do consume it.—A. W.

[My opinion is identical with your own; but we shall soon have the matter placed beyond doubt, since "R. S." has responded to the appeal in page 246 by submitting the alleged carnivorous propensities of bees to the test of experiment, and will ere long be in a position to report the result.—A DEVONSHIRE BEE-KEEPER.

We have another communication on the same subject decidedly evidencing that bees are not carnivorous. It will appear in our columns next week.—EDS.]

UNITING QUEEN TO BEES—WASPS EAT BEES.

I THINK the want of success in introducing Ligurian queens into stocks of black bees, is in consequence of allowing the queen to go into the hive too soon after the removal of the black queen.

I find that fumigation injures the constitution of the bees; and although they appear to recover perfectly, the mortality afterwards is very great and rapid. The queen does not appear to suffer so much from the fumes as her subjects.

I have just placed a Ligurian queen at the head of a black stock with perfect success. On Monday last I received from Mr. Woodbury by train a Ligurian queen, and lost no time in removing the black lady from one of my stocks on

Tuesday. After allowing the bees to communicate with the strange queen through zinc for some hours, I let her go down into the hive; shortly after I had to release her from a cluster of workers, and had some difficulty in getting her from two bees who had her firmly pinioned by each wing. The next day about 3 p.m., after great management and caution on my part, she was received with the greatest affection, and pollen was taken into the hive.

The bees do not as a rule sting the queens, but smother them. This, however, may depend on the temper of the bees: some are much more irritable than others.

Have any of your correspondents noticed that the wasps eat the bees alive in their hives? They eat the soft part of the body, leaving the trunk and head walking about the floor-board. This is only, I believe, in weak stocks; strong hives do not, I think, suffer in general from them.—J. L.

[There is very great uncertainty attending the introduction of a strange queen, and you were very fortunate in inducing your bees to accept the alien monarch after they had once imprisoned her. We have on more than one occasion known queens destroyed after they had been permitted to lay eggs, and have often seen queens stung by workers.

We can confirm your statement as to the way in which wasps serve living bees. We have seen them treat both bees and daddy longlegs in this manner.]

BEES AND THEIR MANAGEMENT.

(Concluded from page 302.)

NOW for one of the greatest difficulties in this department of bee management which I ever encountered, but yet combined with one of the most striking and instructive facts in the natural history of the bee which I ever witnessed. My first and best swarm came out about eleven o'clock in the morning of Whit-Monday. It was soon hived and protected from the intense heat by the shade of a kitchen table-cloth and an umbrella. In about an hour and a half afterwards another swarm was on the wing, and just as I had secured it the first swarm left its hive, and rising 20 feet or more above its domicile, commenced a gyratory progressive movement in the direction of a thick wood about a quarter of a mile distant. I almost despaired, but with two other helpers started at once in hot pursuit, equipped with bee-dress, brush, and hive. The bees made straight for a large ash tree, encompassed with the thick foliage of the surrounding copse, through which they took their course unerringly to a small round hole, scarcely half an inch across, in the upper part of the trunk. I knew the tree well, but was not aware before that it was hollow. The damp had penetrated into some old wound, over which the alburnum had closed, giving to the trunk the appearance of perfect soundness. My hope of recovering that swarm was at first very slight indeed, but I saved it after all, and in this way. I suspected that, notwithstanding the specious appearance of the tree, it was unsound throughout, and that if I dug between the roots a little below the surface of the soil I might open communication with my bees above. My conclusions were soon verified, and, by dint of digging and cutting, I opened a hole at the bottom of the trunk large enough to admit my hand, and soon obtained evidence, from a mass of fine touchwood raspings, that the bees had been at work with their mandibles for some days past in scooping out a new domicile in close contiguity with the point of ingress. Only one chance remained for me, and that was to start them afresh by making their new home as uncomfortable as I could. My plans were laid and adopted in a quarter of an hour. I had recourse to the magic puff ball, *Lycoperdon giganteum*, a piece of which, as large as my fist, I lighted and placed in the hole. The difficulty to displace the air above was at first insuperable; I could not create a current from the smallness of the opening above. Three pieces of buff ball I burnt in this way in vain. I next had recourse to the flame of lighted paper, and in about an hour and a half could just perceive a small quantity of damp smoke issue from the hole, followed by a stream of bees. But, alas! the smoke soon subsided, and my bees returned. Knocking the trunk and blowing through the hole with a pair of bellows were equally in vain. My *dernier resort* was brimstone—for my

only alternative now was to "kill or cure." As its fumes rose slowly to the hollow, there was a terrible commotion among the bees, and in a few minutes some dozen or two fell suffocated on the brimstoned paper. I feared for the queen, wondering whether she would have time to free herself from the embraces of her loyal subjects before her doom was sealed. The outside of the tree was now covered with bees running about, many of them feebly, in a state of wild excitement. I had only to wait a couple of minutes to see a cluster forming on a blackthorn tree not ten yards distant—the queen was there, and in ten minutes the swarm was safely hived. I took it home in triumph an hour or two after sunset, for I never, if I can help it, move a newly-hived swarm to its final destination before that time. It is now a first-rate stock, full of bees and honey. I have no doubt whatever, both from the line of flight and the evidence already noticed, that the bees were instinctively moving to a previously selected habitation; and I have as little doubt that the swarming of the first colony from the hive in spring is nothing but a general muster, that all the emigrants may take wing together under the direction of experienced guides to a home of which they have already received ample information. This is merely a fact corroborative of a long broached idea, and illustrative of one of the wonders of animal instinct. Here is another analogous fact, which I relate, because it supplies the only missing link in the chain of my deductions. I can vouch for it by personal inquiry and inspection. A swarm of bees, belonging to a cottager living in a village about three miles from hence, made directly for a small crevice between the arch and woodwork of one of the windows of a house in the same village. That they did not alight there by mere accident is evident from the circumstance that a number of bees were observed reconnoitering that very crevice, which seems to communicate with the ceiling joists above, two or three hours before the arrival of the swarm.

Fourthly. With respect to ventilation, a subject the rationale of which every bee-keeper ought to understand, and one as important for the sanitary condition of the hive as for that of the cottage, I have adopted the following expedient for frustrating the invariable effort of the bees to stop up with propolis, the smaller perforations of the zinc plate usually employed to admit air and exclude insects. I cover the opening for ventilation with two zinc plates of different size perforations. The inside piece has holes of a size just sufficient to prevent a bee from passing through, and is placed a quarter of an inch or so in front of the other, which is perforated more finely. This requires the removal of the glutinous barricade much less frequently than would be the case were there no intervening piece between the bees and the smaller perforations. With respect to the system of ventilation adopted by the bees themselves, by which a certain degree of noxious air is removed by the fanners stationed at the mouth of the hive, there is, I conceive a much deeper philosophy connected with this development of instinct than a casual observer would suppose. Is there no appreciation here of the chemical doctrine of "gaseous diffusion," by which gases of different densities intermingle, even when the denser is the lower? The movement of the living fans imparts momentum and directive force to atoms of air already in a state of natural commotion. The instinct of the bee has from the beginning laid hold of a chemical law which natural science only discovered in the last generation. "*Magna opera Jehovah exposita omnibus qui delectantur illis.*"

I had intended to cite some curious illustrations of apian observation and experience which my recent correspondence has most amusingly and instinctively brought to light, but I have already occupied your space too fully. I must reserve this until I have something to say about the "Ligurian bees," which I have just introduced into my apiary, and conclude with two or three observations about bee-flowers and honey. In early spring the great requirement is pollen, and the indication of a populous and prosperous hive is afforded by the eagerness with which it is sought. Bees revel among willows, and in a bed of osiers they find an ample storehouse of spring provision. Of course they ransack the nectaries of all early flowers, and the leaves of the laurel and the ivy also afford them very grateful supplies. Those of the former are punctured in the very early spring

by a solitary aphid, and if closely examined will be found to contain an exudation of a transparent gummy character, viscous and saccharine. The puncture is generally found on the under side of the leaf, in the cuticle, about an inch from the petiole or footstalk. It requires very close examination to discover it, although I have occasionally seen its honey drop the size of a No. 4 shot. I have no doubt it is excretory. But I must not forget to mention one flower, an early summer one, which from the extraordinary fondness bees evince for it, we call here, by way of pre-eminence, the "bee-flower." It is a *salvia* (*S. nemorosa*), and for gardens large enough for massing different colours is really no mean acquisition. The leaves are glaucous, and the flowers a deep lavender. It flowers early in June and continues all the summer. I will send you a dozen roots with pleasure. I must not say all that I thought of doing respecting the nature and origin of some of the materials from which honey is elaborated. Chemistry can change old rags into sugar, which would be none the less palatable because of its origin, were it not that fancy sometimes affects the taste.

Let us think, then, of "busy bees" only in connection with sweet spring flowers and sweeter honey, and not allow science to vitiate our taste. "Where ignorance is bliss 'tis folly to be wise."—WILLIAM LAW, *Marston Trussell Rectory, Theddingworth, Rugby.*

RECOLLECTIONS OF AN OLD FANCIER.

NO. 4.—TRADESMEN FANCIERS.

I READILY, gladly, even proudly, own to have a great liking for the sons of trade. I like them whether they belong to High Street, or Back Lane. I know them well, and have been fellow-workman with them in carrying out many a literary scheme. I have found, especially among the younger men, a thirst for knowledge, and sometimes an extent of reading which would surprise many who have never come mind to mind in contact with them, and still more surprising when one considers the very few hours a-week they are able to devote to literature. Much kindness extending over many years have I received from tradesmen; and when I hear fine ladies and gentlemen complain of having met with incivility from behind a counter, I have thought, almost said, "Have you, sir, been quite the gentleman, or you, madam, quite the lady to those of whom you complain? Have you been civil, or only haughty? Have you felt there was the same blood in the one that handed you an article of dress, or showed you a book, as in yourself—that they were your fellow creatures and fellow Christians? Have you been kind, and spoken in a tone of voice which showed you respected the feelings of others? If you cannot say on your conscience that you have done all this, need you wonder as to what you have met with, taking poor human nature as it is?"

Now, the industrious tradesman, who looks well after his business, has naturally a very stationary position; he must be a keeper at home, he cannot leave his duties; in plainer words, he must "stick to the shop." But such a man so situated, needs above all men, a hobby, yea, I am sure all men need one; a little outlet to certain feelings almost indescribable, something which is to the man what a toy is to a child. "We should cultivate the pleasure gardens of our minds as well as the corn fields," said Archbishop Whately. Wise, beautiful words! The man who has no innocent hobby is apt to make vice his hobby.

But, in regard to tradesmen, they must not have a hobby which, by taking them from home, removes them from positive duties—which, in fact, would interfere with their providing for their families. Thus horses are always dangerous if made a hobby of. Oh! the many "horsey" tradesmen that I have known come to ruin. Horses lead to hunting, then hunting to absence from home. Even a professional man is sometimes injured in this way. I knew a surgeon who soothed his conscience as to hunting by saying of the master of the pack, "If Lord So-and-so should have a fall and break his collar bone, it would be the making of me." However, my lord never fell and broke a bone, but the doctor's patients fell off instead, calling in another surgeon during his absence.

Worse than hunting, far worse (and I wish to say ever a word to do good as well as to amuse or instruct), is racing, as

that involves gambling. A tradesman, owner of a racing pony, known to me in early days, ended his career a suicide in a county jail.

Well, then, having settled it that an industrious, careful tradesman ought not to be away from home in business hours, where may he find a suitable hobby? And, in passing, let me add, that in these days of much travelling and sight-seeing, home pleasures are apt to be despised. Our truest, our best pleasures are at home, easy of access, close to us—like the daisies they lie very near, if we will but look for them.

In what, then, I ask, may the man, much by necessity and duty at home, find an innocent hobby? First, in flowers, and especially in florists' flowers. These are better as a hobby than a general garden, for they require such constant looking after, and like children, care of them increases our love. "People talk of a proper pride, sir, you might as well talk of a proper dunghill," said a stern divine of old days; but he was wrong, quite wrong. There may be a proper pride: thus a man may have a proper pride in his flowers. How well do I remember the pride, yes proper pride, with which a grocer showed me his bed of Ranunculuses. There, under an awning, carefully tended, were the glorious flowers, glowing, bright, and beautiful, the result of days and weeks of care.

Then, is there not a proper pride when a prize has been won? Before exhibition-day what family consultations there are, why the whole household is concerned in the matter—"Shall it be this flower or that?"—and the pride of all when the prize is brought home! I once found a schoolmaster whose hobby was his orchard-house, garden he could have none, for that was all playground; but on the little space to spare he built an orchard-house, and there he forgot his woes, the boys' noise, and the false quantities and bad syntax.

But not only flowers, there are birds, fowls, pigeons, and rabbits, all these prove excellent and harmless hobbies. The eye of Crabbe, a town-bred man like myself, saw the use of hobbies, and what they were. After describing a small tradesman's family, he says—

"True pleasure hails them from some favourite source,
And health, amusement, children, wife, or friend,
With life's dull views their consolations blend.
Nor these alone possess the lenient power
Of soothing life in the desponding hour.
Some favourite studies, some delightful care,
The mind with trouble and distresses share;
And by a coin, a flower, a verse, a boat,
The stagnant spirits have been set afloat;
They pleased at first, and then the habit grew."

"Oft have I smiled the happy pride to see
Of humble tradesmen in their evening glee,
When of some pleasing, fancied good possessed,
Each grew alert, was busy, and was blessed.
Whether the call bird yield the hour's delight,
Or, magnified in microscope, the mite,
Or whether Tumblers, Croppers, Carriers seize
The gentle mind, they rule it and they please."

Fowls Crabbe does not mention, though he well might; for into how many a backyard have I gone to see them—how many a cockloft have I climbed into to see Pigeons—how many an outhouse to examine the wondrous ears of some prize Rabbit; or stood in the little walled garden to watch the habits, or hear narrated to me, of now a Hawk, and then a Plover!

As to the benefit derived from a hobby, of that, as well as the pleasure afforded, I am quite confident. A hobby is a relief to the mind, it employs some of its loose faculties. Yea, it promotes good temper, soothes a ruffled spirit. A brief run from the ledger to look at fowls or flowers is refreshing.

Then a man's little plans for the improvement of his birds, his pleasant intercourse with other fanciers. I own that I think live things are better for hobbies than anything else. A man may become tired of collecting stamps, or of autographs, but rarely will he tire of birds. A bishop was accustomed to get up and say, after a hard day's work in his library, "Now, then, I will go and have a look at my pigs;" and a witty friend of mine declares of a super-Calvinistic divine, that it was wonderful how less terrific his opinions became after he took to Cochins.

So I say, let every man have his hobby, and he will be the better for it, so long as he rides it, and it does not run away with him. And further, let every man whose duty makes

him stay at home, have a home hobby, and it will bring him no injury—not the hunter, nor the racehorse, but rather the florists' flower, or the bird, the fowl, the Pigeon, or even the despised Rabbit. High Street may have some of the former, Back Lane some of the latter.—WILTSHIRE RECTOR.

OUR LETTER BOX.

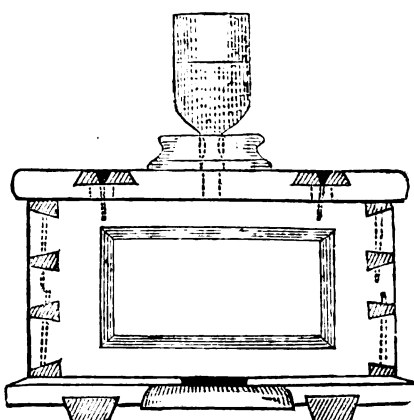
"Y. B. A. Z."—We have a letter for this correspondent—whither shall it be directed?

LACED FANTAIL PIGEONS (A. P. L.).—If Laced Fantails could be produced of equally good carriage, and with as ample tails as the common Fantail, they would compete well in a general class for this beautiful variety of Pigeon, but as yet none have been publicly exhibited at all equal to the usual White Fantails in these most essential peculiarities. If a pen of Laced Fantails were equally good, we believe that almost every one of our principal Pigeon arbitrators would decide in their favour, simply in recognition of their peculiar feather and comparative scarcity; but the birds hitherto shown were decidedly open to great improvement before they could claim an approach to equality with our best Fantails. It is quite impossible, nevertheless, to give any opinion on birds we have not seen.

TIMES' BEE-MASTER.—We have received various communications—some attacking and some defending him; but we think it best to occupy no more space concerning so unworthy a book. The line of defence adopted is, that though the book is very faulty, yet errors are to be found in other works on bee-management, which is no more a defence than was the excuse offered for a bad picture—"Yes, it is bad; but Jones painted a worse."

BEGINNING BEE-KEEPING (E. C.).—We should recommend your beginning with flat-topped straw hives, such as are described in "Bee-keeping for the Many," under the name of "Payne's Improved Cottage Hive," but made rather larger—16 inches diameter inside, by 8 or 9 inches deep, is a good size. These hives have a central aperture in the top, 4 inches in diameter, over which is placed a small super, which is not, however, intended to prevent swarming. If you wish to adopt the depriving system you may have straw hives made after the pattern described by Mr. Woodbury in his paper on bee-keeping, which appeared in the "Journal" of the Bath and West of England Agricultural Society. Mr. Woodbury says—"Stock-hives may be 16 inches in diameter by 9 deep, inside. As a flat-top of this size, when made of straw, is apt to sink with the weight of the comb, it may be formed of two circular pieces of half-inch wood, glued and nailed together, with the grain crossed, to prevent warping. There should be a two-inch central aperture for feeding, and two slits, half an inch wide, by 6 inches long, on either side, and as near to the sides of the hive as possible. The two-inch hole should be closed by a bit of tin or zinc when the bees are admitted into a super through the side apertures, as the queen is apt to lay eggs in the super when central communication is permitted. When not in use all egress through these apertures is stopped by means of wooden blocks." Either of these hives will enable you to commence bee-keeping economically, conveniently, and profitably. Whenever you wish to step beyond them we advise you to go at once to Woodbury frame-hives, of which you will find a working description, with illustrations, in "Bee-keeping for the Many." Frame-hives have become almost universal in America, and they present so many advantages that we cannot but believe they will rapidly supersede all others in the apiaries of such of our British bee-keepers as aim at something beyond the old-fashioned straw hive and brimstone-pit.

FEEDING BEES (J. F. N., Wandswoth).—No bee-feeder is equal to



the inverted bottle when used as shown in the engraving. A common pickle-bottle does admirably for copious feeding, and a four-ounce or six-ounce phial for spring-feeding. The mouth of the bottle should be covered with coarse net, and if a bit of perforated zinc be interposed it will facilitate its being rilled without annoyance from the bees. The supporting wooden block should fit so close that neither bee nor wasp shall be able to obtain a surreptitious sip on the outside.

DR. CUMMING'S BEE LECTURE (A Constant Reader).—We did not notice the lecturer saying that Virgil gives an account of bees in one of his "Elogues," instead of "Georgics," because this was not a mistake from ignorance. Dr. Cumming is not without classical knowledge.

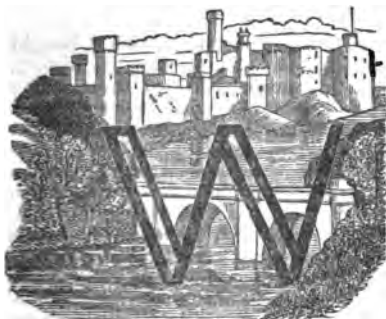
TOMATO SAUCE.—Mrs. G. Dowdeswell, seeing a wish expressed in the last Number for a recipe for making tomato sauce, begs to mention a very simple mode adopted by herself for some few years past, by which she can have the same prepared by the cook as required, fresh at any time. The tomatoes are gathered perfectly ripe, free from cracks or bruises, and are gently wiped with a soft cloth, and placed in a wide-mouthed jar. Some vinegar, having been boiled and allowed to stand until cold, is then poured over them, sufficient being used to entirely cover them. The jar is then covered with wetted bladder, and the tomatoes keep perfectly fresh and good until those of the following season come in. The peasantry in the south of France keep the tomatoes in this simple manner. Their mode of making sauce Mrs. Dowdeswell, unfortunately, has not perfectly; but the tomatoes, in the manner described, can be made as required into sauce by any cook.—The Down House, Worcestershire.

WEEKLY CALENDAR.

Day of M'th.	Day of Week.	NOVEMBER 8—14, 1864.	Average Temperature near London.			Rain in last 37 years.	Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock after Sun.	Day of Year.
			Day.	Night.	Mean.	Days.	m. h.	m. h.	m. h.	m. h.		m. s.	
8	Tu	Hooded Crow arrives.	51.1	34.9	43.0	17	9 47	19 44	42 1	9 0	9	16 0	318
9	W	PRINCE OF WALES BORN, 1841.	50.7	34.8	42.7	15	11 7	17 4	9 2	28 1	10	15 59	314
10	Th	Birch leafless.	50.6	35.3	42.9	21	12 7	16 4	37 2	45 2	11	15 53	315
11	F	Martinmas.	50.9	35.1	43.0	15	14 7	15 4	5 3	5 4	12	15 46	316
12	S	Bunting's note ceases.	50.4	34.1	42.3	16	16 7	13 4	38 3	26 5	13	15 38	317
13	Sun	25 SUNDAY AFTER TRINITY.	49.5	35.4	42.5	20	17 7	13 4	15 4	42 6	14	15 30	318
14	M	Wood Pigeons congregate.	48.0	33.9	40.4	19	19 7	10 4	1 5	53 7	15	15 20	319

From observations taken near London during the last thirty-seven years, the average day temperature of the week is 50.2°, and its night temperature 34.8°. The greatest heat was 63° on the 12th, 1841; and the lowest cold, 18°, on the 9th, 1854. The greatest fall of rain was 1.24 inch.

BEDDING FOR WINTER AND SPRING.



HAT a splendid season! we hear expressed upon all occasions when we come in contact with either town or country gardeners; and so it has been. Surely we may venture to say that the Italian summer has been

equalled for once by that now passed away in Britain.

Among the other wonders this has wrought none are more conspicuous than the gorgeous continued display of colours which all who have a flower garden must have enjoyed up to a much later period of the season than most can remember. A majority of our flower-beds were full, and in fine order until the rather sharp frost on the morning of the 24th of October. This had the effect of putting most people on the alert, who had their tender or valued sorts of bedding stuff still out.

It might by many parties be considered that this late continuance of flowering, in comparison to other seasons, would be a hindrance to the planting of winter and spring bedding stuff. This is not so, but very much in its favour. If such things as Pansies, Silene, Myosotis, Stocks, &c., be planted in their winter quarters early, and we have a good amount of sun afterwards, they invariably commence growing fast, and are, therefore, tender when the sharp winter frosts begin. Silene is, perhaps, the most difficult to get in at the proper stage. This season, however, we have overcome that most effectually. Upon observing that the fine weather was bringing these plants too forward, I set a man with a fork to raise the plants quite up, and then tread them in again; we have repeated this until they are starved but sturdy-looking plants, and likely to meet any frost without injury. Nothing makes such splendid spring beds as the Silene pendula, both white and red.

The beds and borders filled up to this time consist of one bed of dark Auricula, edging Arabis lucida variegata; yellow Auricula, edging of the same Arabis; Polyanthus black, red, yellow, and variegated, with Crocus edgings; white Pansy with blue Scilla edging; Magpie Pansy, with Dog's-tooth Violet edging; yellow Alyssum, with dark red Daisy edging; white Evergreen Candytuft, with blue Pansy edging. All these are crammed quite full, not an inch of soil to be seen; our stock allows us to do this; for although the season has been dry, and it was consequently difficult to manage these plants, every one was kept in some shady place with only a sparing amount of water.

The smaller borders we are now (October 28th), busy

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digging what we term spit and a half. This allows us to give a good dressing, and also to take up the bulbs left in the border over the summer. These are arranged and planted again as the work proceeds, planting the bulbs in rows or otherwise on the top of the first-turned-down spit.—J. F., Cliveden.

(To be continued.)

VINES FOR THE ORCHARD-HOUSE.

ARE you ever asked to recommend Vines for an orchard-house? If so, be sure to place Trentham Black the first on your list.

In one large orchard-house which covers 300 square yards I planted a Vine to each of the pillars, to see if good Grapes could be grown in Nottinghamshire without heat. The only ones I had much faith in were the white and rose-coloured Muscadines, though I hoped the Black Hamburgh might ripen; but to prove them I planted several other varieties. The result is that the Muscadines have been ripe and cut long ago. Chasselas Vibert has also been dead ripe some time, but is not worth growing, being too small and shabby-looking, though good in flavour; the bunches and berries are only about half the size of the White Muscadine.

The Black Hamburghs are good in colour, thin-skinned, and in flavour quite equal to those grown in heat, though not quite so large. The Trentham Black is, however, quite the best, being richer, larger, and blacker than the Hamburghs, and in every way superior. In the hot-house the Trentham Black is a first-rate early Grape, we cut about 40 lbs. from a young Vine this season; but it would not be wise to plant too many of this variety in our early house, as it is too thin-skinned to keep long after it is ripe. With us it is earlier, larger, and richer than any of the Hamburghs, and all persons would do well, I think, to plant one of this kind; but as a variety to be grown in a cool or cold house there can be few or none equal to it.

We really cannot be too careful in recommending fruit trees; it is so tiresome, after waiting years, to find it necessary to replace a worthless variety. I called a short time since at Frogmore, and as the Prolific Muscat, raised in that garden, will hardly grow with me, I asked to see it in fruit, and was told it had been destroyed as worthless! What will those say who have given from one to two guineas a plant for it, and that so recently?—J. R. PEARSON, Chilwell.

HARDY FERNS:

HOW I COLLECTED AND CULTIVATED THEM.—No. 3.

THROUGH the Trossachs—not walking or driving leisurely, stopping here and there to admire, now dragging this wheel, now getting down for a lounge up that hill;—but dashing, scrambling, tearing along on the outside of a rickety old coach, driven unicorn fashion, with a wild-looking "leader," having a mad devil in

No. 341.—VOL. XXXII., OLD SERIES.

her eye, called "Black Bess" by the coachman, who, instead of minding his horses, kept quoting Sir Walter Scott, to the intense horror of one of our party, a superb four-in-hand "whip."

Oh! the perils of that drive—the ludicrous mixture of the sublime and the ridiculous. Black Bess scorned a whip, and the coachman employed his to illustrate his quotations. "There, madam, is the rock where Fitz James withstood Roderick Dhu."

* His back against a rock he bore,
And firmly placed his foot before.*

Hold in, Bess, will you; what's up now?" "My good friend," broke in the whip, "do let me have the reins. Do, pray, be careful." "Bless you, sir, don't be frightened, Bess is as gentle as a lamb when you let her have her own way. Hold hard, old girl. Now for it;" and like a mad thing, Bess was tearing down a grip, and pulling might and main up a steep ascent.

A few more alarming quotations and we come to Loch Katrine, lying graceful and beaming, with its little sunny isles beneath the shadow of its mountains and its trees.

A small steamer plies up and down this lovely lake, and you find yourself looking out for landmarks given you by Scott. The "beach of pebble bright as snow," the "silver strand" are there, it only needs "fair Ellen's" voice to take the place of the rough music of the paddles.

Loch Katrine is a graceful preparation for the grander beauty of Loch Lomond. I can hardly fancy a lovelier picture than that which bursts upon you as you near the inn of Inversnaid, Ben after Ben rising in the distance, some brown, some blue, and some with bright patches of green here and there.

I did not forget the Ferns. I spent hours hunting the hill-sides at Inversnaid. *Oreopteris* grew in abundance, with beautiful *Filix-femina* and other common Ferns. I had made friends on the lake with a gentleman, armed as I was with trowel and bag. He joined us in the walk.

"What success?" I asked, half hoping he had found some rarity, half fearing lest his booty should exceed my own. He shook his head. I opened my store triumphantly. "Look here," I said, "is not this a wonderful find?" and I displayed a graceful little Fern. "This is the *Woodsia ilvensis*!"

I saw a twinkle in the "Fern-man's" eye; but he told me gravely my specimen was only a baby "*Filix-femina*;" and then he added, how troublesome baby Ferns always were, and that one could not easily decide on a Fern unless there was fructification. I might hunt for varieties of *Filix-mas* and *femina*, but he thought I should find nothing else. Then he discoursed of Ferns in general and of Fern-hunters, how he found ladies looking for *Septentrionale* in a wood, for *Ceterach* in a ditch, and for *Asplenium viride* on a wall. "I do," said I.

"It is a pity to waste time," he answered. "Find out the whereabouts before you search. Know what you are likely to find, and then take anything strange you meet with." And so it came to pass I only brought away from Inversnaid a few young plants of *Oreopteris* and a *Lycopodium* or two; but I took to more diligent readings of Moore, and wished there had been a few simple directions as to the "how" of finding Ferns.

Of course we made the tour of Loch Lomond in the steamer, which was filled with a strange mass of human beings bent on pleasure—the geologist with his hammer, the young girl with her sketch-book, the botanist with a round tin at his back, the pedestrian with his knapsack. For five minutes we scanned each other, and then turned our attention to the scenery. It was a glorious day—a day of strongest lights and shadows—a day of sun and cloud; and I could scarce fancy any luxury greater than lying down on a sofa of plaids and sailing through this beautiful world of waters—a world cut off, as it seemed to be, from any outer world by high frowning mountains, by steep shaggy rocks—every minute the scene changing, bold rugged Bens melting away into bright green islands, and these into a far-off distance of more gentle outline. Looking from side to side as you approach Inverarnon, you come to a hill covered with Firs, some standing, many fallen, and already "barked." A picturesque group of women in red petticoats and white jackets are seated by a picnic fire cooking; these

are the 'barkers,' who live in rough huts built about the wood during their season of work, and vividly remind one of the Olive gatherers in the Olive woods of Sardinia.

From the head of Loch Lomond a coach conveys you over the Black Mountain and through the awful pass of Glencoe to the hotel of Banavie at the foot of Ben Nevis, where I was assured I should undoubtedly find *Polystichum lonchitis*; and up the sides I tramped many a weary mile in the search, now scrambling up a rocky path, now floundering in a bog—but no *lonchitis*. Indeed, I may here own that I have never found one plant of this most interesting Fern. "*Lonchitidoides*" I have found in plenty, and some bearing such close resemblance to *lonchitis* as for a time to create a doubt even in the mind of Mr. Bree; but the doubt cannot last very long, for I have proved the fact that *lonchitidoides* in time becomes *lobatum*, and after a while *lobatum* becomes *P. aculeatum*. I have watched the plants changing from year to year, and have had many an argument about it; but each Fern-grower can prove it for himself in three or four years.

I have one large plant of true *lonchitis*, which I bought at a small nursery without being able to trace its history, and from which I have this autumn divided three young plants. There is one feature in *lonchitis* which entirely divides it from *lonchitidoides*—the pinnules, even in the tiniest frond, lap over each other like the scales on a fish's back; each pinnule is furnished with sharp teeth, with a projection like an ear close to the rachis, which is covered with brown scales; the fronds grow stiff and erect, and its whole formation gives one the idea of protection from wet. The fronds spring from the centre, throwing up several sets of fronds during the summer, the whole preserving a compact vase-like form. During the extreme heat of summer, after watering the Ferns I made a practice of pouring a little water into the cup of the plant, thinking to encourage the new fronds. After some time I observed a little frond quite perfect, yet very small, spread itself like a guard over the nest of young fronds. I gave up my system of encouragement, and, instead, threw a little cocoa-nut refuse into the centre of the cup as a protection; and this has answered beautifully, and the plant has thirty fronds on it of this year's growth, but the long-continued drought has caused these to be less fine than usual.

In the wooded dells at the foot of Ben Nevis I found the *Pyrola*, whose pretty bell-like blossoms of white with a rosy flush were as fragrant as a bowl of Lilies of the Valley. I brought several plants away, but failed to make them grow.

My next hunting ground was Oban and its neighbourhood; and here I had great success with *Cystopteris fragilis*, which abounds in many beautiful varieties. On the road to the Kerrara Ferry I found *angustata*, with its acutely drawn-out length of frond and pinna; *dentata*, broad and stumpy-looking, bearing a near resemblance to *Dickieana*, save that the fronds are more robust and the pinnae not quite so closely approaching each other. I have never found *C. alpina*, *C. montana*, or *Dickieana*; but I possess many healthy plants of each variety excepting *montana*, which I have lately procured from Mr. Veitch's nursery. It promises to grow rapidly as the others do, but I daresay it will need a little extra care.

The walk from Oban to the Ferry will repay the tourist, even if he be not a lover of Ferns. Amongst the heather he will find the Golden Asphodel with its feathery blossoms of exquisite form; and in July there are beds of rich ripe Strawberries scenting the air, which blows pure and fresh around him. He should go at eventide and watch the sun setting over one of Nature's loveliest scenes. The sea, broken into numerous still calm lakes by rocky islands, reflects every golden cloud, while the distant mountains form a frame of the softest blue; and above and beneath, it is the same fair scene.

Oban is a real Scotch town—you feel you are in the Highlands. The people talk a *patois* of English-Gaelic, and understand you with difficulty; the shopkeepers have an English of their own. It is a strange isolated community grafting English fashions slowly on northern stocks.

You go to a "store" to buy calico or some little matter. "Have you any good calico?" you ask. "Yes—no—I think—my calico is worth hardly anything just. Yes, it's very

bad calico." Perhaps you are obliged to have it, and, to your surprise, find it very dear. You remonstrate. "Yes, I think it's very dear calico, and no good in it," they answer. Then their good nature is wonderful. They will know your business, and will insist upon trying to help you.

In a country walk you pass by what looks like a huge washhouse. "Is that a washhouse?" you ask a poor woman in the road. "A washhouse, is it? Yes, I think. Is it a washerwoman you want? Allow me to recommend you one; it's Mistress McFarlane, of Tweedle Street; she's just the most perteklar woman in fine linen and dressing."

Staffa and Iona are "done" from Oban, but it was just afraid of the water I was; so I watched the departing and returning steamer in peace, picturing to myself the damp beauty of Fingal's Cave; the ruined cathedral standing out against the clear blue sky; and wondering what Columba would have said to the Free Kirk in Scotland, and whether any Ferns grew upon the weather-beaten island.

I spent a day on Kerrara, hunting in vain; but it is not time wasted, for the shores of the island are very beautiful, and the slopes green and sunny, and many a lesson of life may be learned while listening to the quiet music of the waves breaking against the shore.—FELIX-FEMINA.

DECORATION OF THE FLOWER GARDEN IN WINTER AND SPRING.

(Continued from page 346.)

FLOWERING AND VARIEGATED PLANTS.

EARLY spring-flowering plants are, as the following lists of those most suitable for planting in masses will show, pretty numerous, furnishing materials for a fine display from the blooming of the delicately-tinted Christmas Rose till the gorgeous queen of flowers herself comes forth. Such plants offer almost every shade of colour in their bloom, diversity of form, habit, and foliage, this in many cases being variegated, or otherwise ornamental. Thus the flower-gardener, who is possessed of taste, energy, and intelligence, has at his disposal materials which will enable him to make no inconsiderable display during the early spring, spring, and early summer months. Numerous, however, as the materials are now, there is every probability that when a taste has been disseminated a greater demand will arise, and more will be forthcoming.

As a rule the tints of flowers are lighter during the cooler portion of the year. In spring we have an endless variety of white flowers; summer abounds more in scarlets and reds; and autumn in yellows and purples. In a gardening point of view man very much alters the natural distribution of the colours, and the garden is made to teem with scarlet in autumn, and this tells well on account of the preponderance of green at that time.

Spring-flowering plants may be divided into five sections, according to the colour of the flowers and foliage—viz., 1st, Whites, including those with silvery foliage or white variegation; 2nd, Blues; 3rd, Yellows, including those with golden variegation; 4th, Purples; and 5th, Reds, including reddish-purples.

1ST.—WHITE SPRING-FLOWERING PLANTS.

Of these the most interesting and beautiful is the Christmas Rose (*Helleborus niger*). It attains a height of about 1 foot, and is well adapted for a centre to a bed of bright colours on account of the bright green of its foliage, which forms an excellent neuter, whilst the flowers are most interesting, especially when peering from beneath a bed of snow. It will grow anywhere, but prefers a rich light soil, with occasional applications of leaf mould. It is increased by division of the root.

Arabis alpina, *albida*, *grandiflora*, and *lucida*, are well-known profuse bloomers, forming a close carpet of whitish foliage. Being of dwarf growth they are well adapted for low beds and ribbon-planting. *A. albida* variegata, with white variegation, is admirably adapted for edgings. All are most readily increased by division. Small portions put in 6 inches apart in nursery-beds in spring, after blooming, will make fine plants by autumn, and may then be moved with balls to the places assigned to them in the flower garden.

Hepatica triloba alba, or white *Hepatica*, is lovely, not growing more than a few inches in height. I have seen many so-called double white *Hepaticas*, which were only dwarf double Wood Anemones.

Saxifraga oppositifolia alba is most charming; the bed should be surfaced with small rock stones or clinkers, and the interstices filled with sandy loam and peat in equal parts, in which the plants are to be planted. *Saxifrages* of all kinds require the same treatment—viz., to be placed on raised beds of rockwork, clinkers, brick, or even flint, and after filling the interstices with soil they should be planted thickly, so as to cover the surface. They then form pleasing beds.

Stellaria holostea is nothing more than a weed in our woods; but a very pretty weed it is, flowering abundantly in ordinary light soils from March to June. It is increased by division of the root after flowering; and the divisions, planted in nursery-beds, make fine roots for moving to the beds in autumn.

Linaria cymbalaria alba is a pretty trailing plant 3 or 4 inches high, and makes a lovely edging or bed if treated in the same way as the *Saxifrages*. The variegated form is also fine on account of its foliage. It requires a sandy loam, and is increased by division or rooted stems.

The next plant worthy of notice is *Mentha sylvestris variegata*, the merit of which consists in its foliage; hence it is useful for edgings and line work. It is increased by cuttings and division.

Phlox Nelsoni, than which nothing is handsomer, should be planted on raised beds, as described for *Saxifraga oppositifolia*, as it is impatient of stagnant moisture. It likes a sandy soil, and seems all the better of a little peat. Cuttings and division. *Phlox nivalis* is a fine free-blooming sort, not exceeding 6 inches in height. It does best in raised beds, and is benefited by a little sandy peat. It was, and I believe is, scarce in gardens.

Of *Bellis perennis* there are many fine double varieties. They are of most easy culture, it being only necessary to divide the roots. They are fine edging plants. Light sandy soil is best.

Lamium maculatum (*longiflorum*) *album* is another pretty weed of our own hedges, flowering in March and onwards; growing freely in common soil, and readily increased by division. It grows about 1 foot high, and is very fine when well grown.

Primula nivea, *vulgaris alba*, the double form of the first species, and *Primula vulgaris alba plena*, are well known, and amongst the handsomest of spring flowers. The white Cowslip (*P. veris alba*) is also pretty. Division.

Ranunculus amplexicaulis, from the Pyrenees, grows about a foot high, and makes a fine bed. It will grow anywhere in an open situation, and in common soil. It is increased by division.

Isopyrum thalictroides is a pretty white and green flowering plant, attaining a height of 9 inches, and flourishing in sandy loam. Division.

Iberis sempervirens, *saxatilis*, *corifolia*, *Tenoreana*, and *gibraltarica*, are fine evergreen under-shrubs, attaining a height of from 6 to 12 inches, and flowering so profusely as to be sheets of snowy white in April and onwards. They will grow in any kind of soil, but bloom earlier in that which is light and sandy. They are most readily propagated by cuttings.

Trillium grandiflorum, a tuberous-rooted plant, is a charming thing not much more than 6 inches high, delighting in sandy soil, and doing best of all in sandy peat. Increased by parting the roots.

Iris pumila alba and *I. sibirica alba* are very neat dwarf plants, flowering in March and April; effective in groups. Division.

Arenaria balearica is a very pretty trailer, and not less so is *A. ciliata*. They are increased by division, require light soil, and are always improved by a little peat.

Ficaria ranunculoides alba is all but a yellow. It is a pretty little plant, growing about 6 inches high, has tuberous roots, and is increased by division. *A. montana* we must also have.

Antennaria margaritacea is a splendid white-foliaged plant, suitable for forming a band, line, or edging, a foot wide and the same high. The young shoots rise from the stool, and are as white as snow, in April, when the plant may be in

creased by slips like Sage, each slip having an inch or two of the root-stem attached. It makes a splendid row or ribbon all through the summer, and it flowers so well from June to September as to be valuable for bedding purposes; but being in every cottage garden, and as hardy as the Nettle, no one cares about it.

Asperula odorata (Woodroof), a common plant of our woods, flowering in May and onwards, is a fine thing as everybody knows. It grows about 9 inches high, has white sweet-scented flowers, likes a sandy soil, and is increased by division. *A. taurina*, from Italy, is a suitable companion to the English Woodroof, and a very pretty plant. It is increased by division.

Dodecatheon meadia albidum is a very pretty American Cowslip, growing freely in loam, attaining the height of a foot, and increased by division.

What is handsomer than our Cloudberry (*Rubus chamaemorus*), so dwarf and altogether lovely? It grows freely from suckers in loam, and better still if a little peat be added. *R. saxatilis*, too, is no mean ornament, but its blooming is a little too late, not being general till June, otherwise it is a dwarf trailer with few rivals.

Again, there is the lovely *Cochlearia integrifolia*, *fenestrata*, *pyrenaica*, *officinalis minor*, and its sub-variety *rotundifolia*, all white-flowered biennials, growing 3 or 4 inches high, and all alike fine.

Cardamine pratensis flore pleno, which has dirty-white flowers, just comes to mind as being suitable for those who may strive to find an excuse for the emptiness of their flower-beds on account of the wetness of the soil. This is the plant for such. *C. bellidifolia* will suit places at a high elevation, like Ben Nevis on the other side of the Tweed, whilst those situated on low ground will find *C. trifolia* useful. Division.

The *Hutchinsia calycina* and *H. alpina* are nice things, the former a mere pigmy of about 2 inches, fond of sandy peat soil; and the other 4 inches high, and growing anywhere in common soil; both are increased by division.

Glaux maritima alba is a pretty trailer, growing freely in sandy soil, and attaining a height of 3 or 4 inches. It is best raised from seed, and is also increased by division.

Androsace villosa, with dirty-white flowers, and *A. chamaejasme*, dirtier still, are nevertheless very pretty; but though occasionally flowering early, are not to be depended on. Sandy peat is the best soil for them. Increased by division.

Jeffersonia diphylla is a pretty plant, doing well in sandy loam. It is increased by division.

Corema alba, an under-shrub about a foot high, is, beyond dispute, fine; though its flowers are not of the gayest, yet it is handsome, and has white berries afterwards. Requires sandy peat, and is increased by layers.

Prunella vulgaris alba, a native plant, is curious, rather precarious as to time of blooming, but as it does occasionally bloom early we must have it, and divide the roots to obtain a stock.

Cornus suecica, from the Scotch and Swedish hills, we must also lay hands on, and grow in bog soil, dividing the roots for stock.

Violas asarifolia, *humilis* (a little Mexican, only hardy in sheltered situations), *odorata alba*, *odorata alba plena* (once common enough, but now scarce), *canadensis*, *bicolor*, *attenuata*, and the white Dog Violet (*V. canina alba*), are all white Violets more without than with scent; they are all increased by division.

Pulmonaria officinalis alba is really ornamental, and grows anywhere. It is about a foot high, and is propagated by dividing the roots.

Schivereckia podolica is all but an *Alyssum*, and fine. It should be grown in light soil, and will do better in peat. Division.

Silene patula and some others, flower pretty early occasionally, but generally not before June.

Cerastium tomentosum, *alpinum*, *lanatum* (will make its way into a ribbon ere long), *latifolium*, *grandiflorum*, *Piebersteini*, and *glaciale*, the first and the last but one well-known ribbon plants, to which others may be added as rivals, especially *C. grandiflorum*. Division.

Besides *Cerastium* we must have others on account of their foliage:—*Funkia Sieboldi variegata*, *Fragaria vesca variegata*, and *Vinca major variegata*, and to these may be added

more flowering plants, as *Saxifraga nivalis*, *pyramidalis*, *intermedia*, *longifolia*, *longifolia media*, *polita*, *tridentata*, *affinis*, *petraea*, *elongella*, *hypnoides* and its varieties *pulchella*, *viscosa*, *mucosa*, and *angustifolia*, and last of all *Stachys lanata*.

2ND.—BLUE SPRING-FLOWERING PLANTS.

Hepatica triloba coerulesa and its variety *plena* (single and double blue Hepaticas), are amongst the earliest and handsomest, and why not grow *H. angulosa*, *acutiloba*, and *americana*? They are fine, but little different in appearance, I mean in flowers, from the commonly cultivated varieties. Division.

Aubrietia deltoidea, *purpurea*, and *A. deltoidea grandiflora* not only flower profusely in spring, but are in fine bloom now (October 24th), and will continue so throughout the winter. Divided in spring like *Arabis*, and grown in nursery-beds, they make fine plants by autumn.

Aster alpinus purpureus is a pretty dwarf species attaining a height of 9 inches. It likes light soil with leaf mould or peat. Division.

Campanula excisa and *gracilis*, are fine, and are increased by division.

Borago orientalis, *laxiflora*, and *cretica*, are fine free-blooming plants, the first attaining a height of from 18 inches to 2 feet, and the last two about a foot. They do best in sandy loam. The first is increased by division, and the last two by cuttings.

Ajuga reptans coerulesa, and the variegated form of *A. reptans*, are nice, not growing more than 6 inches high. Division.

Omphalodes verna is an elegant plant, not above 6 inches high, and makes a nice bed. It likes a light soil, and is increased by division.

Glechoma hederacea, a weed in almost every hedge, has lovely blue flowers in spring, and can be had in any quantity for the trouble of collecting. It is propagated by dividing the roots, or putting in cuttings of the rooted stems.

Geranium pratense, an elegant weed in many meadows, and its double variety (*G. pratense flore pleno*) from the Scotch mountains, would be considerably enhanced in value if they could only be induced to flower a little earlier; as it is they are useful. A stock is obtained by dividing the roots.

Globularia vulgaris, and *linifolia*, are pretty plants, growing about 6 inches high, the former propagated by division, and the other by cuttings.

Soldanella alpina, *montana*, and *crenata*. Very pretty plants, forming fine beds. They must have extra drainage and free soil, with a little leaf mould or peat. Division.

Polemonium reptans makes a nice bed, and will grow anywhere. Division. Height about 6 inches.

Lithospermum prostratum is a pretty trailing plant, attaining a height of about 1 foot. Propagated by cuttings.

Anchusa stylosa, *myosotidiflora*, growing about a foot high, and *A. paniculata*, a tall species, are fine Borage-like plants. The last is raised from cuttings; *stylosa*, though an annual, should be treated as a late-sown biennial, and be sown in autumn; the Forget-me-not-like species (*A. myosotidiflora*) is increased by division.

Above all, we must have *Gentiana verna*, *acaulis*, and its narrow-leaved variety (*angustifolia*); *G. pumila*, *pyrenaica*, *brachyphylla*, *humilis*, from the Caucasus, though it is an annual, and must be sown every year in September, and then add *G. altaica*, a taller species by three-fourths than any of the others. We may obtain them in any quantity by dividing the roots. Well drained soil and leaf mould or peat are essential.

Sisyrinchium grandiflorum is a pretty thing, requiring light soil, and is increased by division.

Pulmonaria azurea is well worthy of cultivation. *P. mollis*, and *P. angustifolia*, though native species, are fine; and *P. paniculata*, and *virginica*, I have looked for a prominent position. Division.

Phyteuma pauciflorum (not so few-flowered as the name implies), *P. Halleri*, and *P. Sieberi*, are pretty. They are increased by division, and grow but a few inches high, except *P. Sieberi*, which attains about 1 foot in height.

Erinus alpinus forms a fine bed, not more than 3 or 4 inches high, and does all the better if grown in light, dry soil. Division.

Veronica petraea, *prostrata*, *aphylla*, *microphylla*, *de-*

pauciflora, scryphillifolia, tessella, nummularia, neglecta, and quaternata, are all lovely little plants not more than a couple of inches high; alpina in many varieties all dwarf and trailing. *V. gentianoides*, a giant in comparison, and many others, are all free-blooming, preferring light soil, and increased by division. Besides these the annual *Veronica*s, which are such miserable things for summer flowering when sown in spring, are never seen to advantage unless sown in September, for their time of flowering is in the spring, and they evidently dislike the heat and dryness of summer.

Vincas are fine, especially *V. herbacea*, major, and minor, their foliage being as handsome as their flowers. The double variety of *V. minor*, which I have not seen for the last ten years, is fine, if it flowers as well as I once saw it in a clump many yards wide under the trees of a plantation.

With these must be associated the lovely spring Forget-me-not (*Myosotis montana*). It flourishes in moist soils, and in sunny situations flowers with the Snowdrop and Winter Aconite. It has flowers double the size of the Wood Forget-me-not (*M. sylvatica*), and of a brighter blue. It also continues in bloom most of the spring. Division.

I must again call attention to the lovely *Hepatica angulosa*, which has flowers double the size of the single blue *Hepatica*, of a clear and vivid sky blue. The leaves are five-lobed, and hairy. The flowers are borne on stalks from 9 to 12 inches high, and well up above the foliage.

I must conclude the list of blue flowers with *Lis reticulata*, which with the first return of spring sends up its dwarf stems in tufts of from 6 to 9 inches high, affording a succession of really beautiful blossoms of a deep, yet brilliant blue purple, with golden orange at the base. It will find its way into every garden, as it is a charming plant for forcing. *I. pumila* makes pretty groups. It grows 6 inches high, and flowers in April and May, affording a profusion of blue and yellow blooms.—G. ABBEY.

(To be continued.)

THE GROUND VINERY.

THE ground vinery is a great fact and a great success. Mr. Rivers has sent us two bunches of Black Hamburg Grapes, one taken from a Vine in the open air, and the other from one grown in a ground vinery. The former is a small insignificant bunch, with berries the size of swan-shot, green, hard, and acid; the latter, part of what appears to have been a good-sized bunch; the berries large, black as jet, thin-skinned, and deliciously flavoured. In fact they were quite equal to any that could be grown in a vinery. The site and soil of both plants were the same. The bunch of the former hung 9 inches from the ground on a Vine growing in an open border, and a few feet from the ground vinery; the latter was also 9 inches from the ground, but under the ground vinery, and with that protection such great results have been achieved.

From what we have seen in other places these ground vineries will become a necessity in every garden, and must ere long be as common as Sea-kale pots or hand-glasses. A full account of them will be found in Mr. Rivers's "Miniature Fruit Garden."

MAIDSTONE GARDENERS' MUTUAL IMPROVEMENT ASSOCIATION.

A GENERAL meeting of this Society was held at the Rose and Crown Inn on the 12th ult., Mr. J. Robson in the chair.

As announced at the last meeting, Mr. Luckhurst gave an account of his experience in the cultivation of the Pear, several fine specimens of that delicious fruit being exhibited. With proper attention, some kinds of Pear trees would last two or three centuries. One of the best plans to adopt, in order to obtain a good and plentiful crop, was to graft the Pear on a quince stock, from which, with good management, some of the finest fruit might be obtained. Mr. Luckhurst then entered into a detailed account as to the best modes of training a tree, each system having its peculiar advantage, one of the principal objects in view being to make the tree look graceful to the eye. One of these modes was the horizontal system, which had a pretty effect when well trained.

Mr. Luckhurst then enumerated a number of Pears suited to the different seasons, interspersing his remarks with some well-timed and practical hints on the different descriptions. The Chairman followed Mr. Luckhurst with a few observations on the same subject, remarking that one of the most popular plans at one time was the "umbrella" system, which had its advantages, being very graceful to the eye. Another was the pyramid system, upon which Mr. Frost made a few practical remarks. A general discussion ensued, in which Messrs. Wilmore, Whyman, Davis, Luckhurst, and Frost took part, each one giving his experience in the management of the Pear tree. The subject having been fully discussed, the balance-sheet for the year was brought forward and read by Mr. Davis, from which it appeared that the Society had been formed one year, during which time its success had been far beyond the expectations of the most sanguine. During the year they had one most successful Show, and the number of members had increased very considerably. Notwithstanding the small subscription to the Society, the balance in hand at the present time was £36 13s. 2d., £30 8s. 6d. of which was placed in the savings' bank in the name of the trustees of the Society.

MR. RICHARD SMITH'S NURSERIES,

ST. JOHN'S, WORCESTER.

THESE nurseries are situated about a mile and a quarter west of the city. The principal entrance is from the Bramford road, and turning to the left a drive conducts the visitor to Mr. Smith's dwelling and counting-house, the grounds about which are flanked with greenhouses, and laid out with flower-beds on grass, rustic baskets, rockwork, water, &c. The flowers at the time of my visit were being removed, and the beds planted with dwarf plants of the Golden Arbor Vitæ, Silver-blotted Ivy, Golden Holly, Irish Yew, Golden-striped Irish Yew, the Heath-like Japan Cypress, which during the winter becomes of a peculiar violet red colour, and is, therefore, particularly desirable for contrast, especially with light green colours; the Black-leaved Laurustinus, Silver-striped Periwinkle, Irish Gorse, Golden-striped Periwinkle, Silver Holly with red berries, *Aucuba japonica*, *Cerastium tomentosum*, and similar plants, to give variety and contrast to what may be called the winter arrangement of the beds.

On the lawn are fine examples of Weeping Ash, Weeping Beech, the Japan Arbor Vitæ, a dwarf, dense, bushy, and conical-shaped kind, very desirable for lawn specimens; *Wellingtonia gigantea*, *Quercus Fordii*, *Juniperus excelsa* (the tall Juniper), a compact, distinct, and very ornamental pyramidal tree, rather tender, but in sheltered situations forming a beautiful specimen; Nordmann's Silver Fir, of majestic and symmetrical form, and which is most valuable in landscape gardening, its warm green contrasting well with all the shades of blue and grey; the Himalayan Spruce, the Laurel-leaved Oak, deciduous Cypress, and the Silvery-branched Virginian Cedar, which is a beautiful variety of the Red Cedar, with a peculiar whitish appearance, and very useful for contrast, for planting near water, or on rockwork, and as forming a fine cone-shaped tree. *Araucaria imbricata*, with its deep green foliage, rigid form, and symmetrical shape, is about 22 feet high. The lower branches from their length and weight, droop gracefully, and resemble snakes partly curled around the trunk, and stretching forth their long slender bodies in search of prey. I also noticed the *Frankincense Juniper*, symmetrical in form, and having delicate-looking branches, although it is so hardy that no frost will injure it; the large-coned Pine, invaluable for effect in landscape gardening; the green drooping Cedar, a very graceful variety, and as pendulous as a Weeping Willow; and the *Picea nobilis* (the noble Silver Fir), properly so named, for this is certainly one of the most majestic and magnificent trees in cultivation. Douglas writing of it says—"I spent three weeks in a forest composed of this tree, and day by day could not cease to admire it." One of the specimens here measured 3 feet 9 inches round at 3 feet from the ground, and 33 feet in height. Lambert's Pine, the gigantic Arbor Vitæ, the Evergreen Redwood Tree, and *Cupressus Lawsoniana*, were beautiful specimens. All of these are natives of California, and perfectly hardy.

On entering the grounds the first thing that arrests your attention is a carriage drive stretching two-thirds of a mile in a straight line, and altogether through the centre of the nurseries about one mile and a quarter. On each side is a broad edging of turf extending the whole length. Both sides are planted ribbon-border fashion, the first row being the Golden-striped Yew; the Nootka Sound Thujopsis, one of the most valuable introductions of late years, second; then the Irish Yew; fourth, the Deodar Cedar; then the Siberian Arbor Vitæ, well-shaped and useful for variation of colour, and the *Araucaria imbricata*; the whole backed by a Yew hedge. The rows at each side rise in regular gradation from the front row, 2 feet high, to the Yew hedge at the back, 10 feet high.

The next scene on the same carriage drive is a ribbon border planted at one side with a row of Golden Arbor Vitæ, then Portugal Laurel, next Irish Yew, then Thuja Wareana, backed by Irish Yew, 10 feet high. On the other side is a row of choice varieties of Green Holly, then Deodar Cedars, then *Juniperus virginiana*, backed by Irish Yew. The next example of a ribbon border is composed on one side of *Thuja aurea*, *Picea nobilis*, Deodar Cedars, standard Portugal Laurels, and Cedars of Lebanon; and on the other side, Golden Holly, Nordmann's Silver Fir, Irish Yew, *Abies canadensis*, and Thuja Wareana. The arrangement of the various ribbon lines in this noble carriage drive is well worth inspection, in order to see what pleasing effects can be produced by the judicious assortment of form and foliage.

The walk on the left communicates with the Heath-house, New Holland-house, Pelargonium-house, stoves, Fig-houses, propagating-houses, &c., all heated by hot water, and containing a choice collection of young healthy stock. On the right is a house for growing young Vines, 117 feet long, by 17½ feet wide, also orchard-houses, the first nearly 200 feet by 27 feet; another 115 feet, by 25 feet; one 45 feet by 25 feet; and another for growing Figs, 50 feet by 33 feet. There are many thousands of orchard-house trees in fine bearing condition. Altogether there are sixteen large houses for various purposes, and one thousand glass pits, and about three acres of raised brick-beds on which lights can be placed for newly-transplanted stock.

Continuing along the drive which connects the various nurseries together, passing large beds of *Araucarias*, *Abies excelsa inverta* (a new weeping variety), *Picea nobilis*, *P. amabilis*, *P. Nordmanniana*, *P. Pinsapo*, *Wellingtonia gigantea*, *Thujopsis borealis*, *T. dolabrata*, *Podocarpus* of sorts, and masses of many other valuable evergreen Conifers, of which tribe Mr. Smith's stock is allowed to be the finest in the kingdom, we come to a nursery where quarter after quarter, to the extent of thirty acres, is occupied with evergreen trees and shrubs of all hues, sorts, shapes, and sizes, in most luxuriant health. These are cultivated with the greatest care. Mr. Smith never allows any stock to exceed three years without removal, and every plant is formed from its earliest infancy to make a handsome specimen, and thus by timely care the most perfect form that can be desired is obtained without formality and without stiffness.

Thence we pass to the Rose ground of eight acres, and containing one hundred thousand Roses. How, "D., Deal," would revel amidst the beauties he would there behold

"In all their crimson glory spread,
While, drooping fresh the dewy head,
They scent the early morning."

In order to give the public some idea of the stock, I will only observe that standard, half-standard, dwarf, pyramid, bush, orchard, and wall fruit trees, occupy more than forty acres.

We now come to the Gothic lodge at the entrance from the Malvern road, and cross to the nursery opposite, where fruit, forest, and flowering trees each take their place in the most convenient and suitable arrangement. Each class of stock by itself, and the whole arranged for convenience and general effect, is the primary aim in every department.

There are hundreds of standard Portugal Laurels 6 feet high, very handsome for terraces, they make good substitutes for standard Orange trees. The Colchian Laurel, of which there is a large quantity, is different from the common Laurel in leaf, it is more upright and hardy.

The large and commodious packing-shed, with other

offices, is situated in a central part of the ground, it has a large crane attached for loading vans, &c.

To account for the luxuriant state of the young stock which is propagated by thousands, and then transplanted into the raised brick-beds, and the fine stock in the home nurseries, it is only necessary to state that the whole is watered by underground iron pipes and flexible hose, a means to an end which is well worthy of adoption in many places.

To sum up some of the principal features of this establishment, it is worthy of remark, that there are never less than seventy men employed, and the number varies from that to often one hundred and thirty. The space occupied in the cultivation of young stock is thirty acres, and about one million of Conifers and ornamental trees, besides other stock, are annually produced. The glass houses, pits, &c., comprise an area of 64,000 square feet. There are twenty-one miles of walks, though no more exist than are absolutely necessary for convenience in seeing and cultivating the stock advantageously. There are 400,000 stakes used annually, and eighty tons of garden-pots. Besides the nursery, Mr. Smith has a very large seed business connected with his establishment.

The whole was in first-rate order, not a weed to be seen in any department, which reflects great credit on the very intelligent foreman, to whom I am indebted for many of the above particulars.—WILLIAM KEANE.

NEW ZEALAND SPINACH.

ALLOW me to call attention to this vegetable (*Tetragonia expansa*), which I think is not so well known as it deserves. It is most useful, quite equal in flavour to the common Spinach, and more ornamental, having much the appearance of the Ice Plant, which it almost equals for garnishing. It comes in at a season when the common kind is of little use from its so soon running to seed. During the present dry season it has been most valuable, sixteen or seventeen plants having furnished a nice gathering once and twice a-week for the last three or four months; and they will continue to do so till killed by frost.

I find that it does well planted between rows of early Peas, the shade being grateful to it in its early stage of growth; and it comes into use about the time the Peas have to be cleared off. The treading about it in gathering the Peas appears to suit it.

For the information of persons not acquainted with it, I may as well mention that it requires the same treatment as tender annuals—viz., sowing in heat during March or April, pricking off, and planting out towards the end of May, allowing a square yard for each plant. By gathering the young tops for use, great numbers of side shoots are produced.—J. T. CREED, Gardener to T. Swanwick, Esq., Whittington, Chesterfield.

A CROP SAVED BY THE BIRDS.

I FEEL it my duty to report an instance which I think will go far towards establishing the fact that birds are of great service to the gardener. About five weeks ago my crops of Brussels Sprouts, Broccolis, and Savoyas, amounting to some hundreds of plants, were attacked by a multitude of caterpillars; and so severe was this attack that I anticipated the destruction of my crops, and many who saw it pronounced it to be in excess of anything they had ever seen before. I communicated with the Editors of this Journal concerning it, and before their reply came to hand the blackbird, thrush, tomtit, and robin, came to the scene of destruction, and in three days there was not a dozen caterpillars to be seen, all being carried away and eaten by these birds. I can, therefore, report a crop saved by the birds. I may mention that this is not the only instance which I have noticed of the good effected by these birds.—THOMAS RECORD, Belmont, Hendon.

DAHLIA GLABRATA.—I have now (Nov. 1), in my garden in full bloom and beauty an elegant little flower, to which I have attached the sobriquet of the "Lady Flower," from the fact of the attention of all ladies being immediately

rivetted upon it, from its extreme simplicity and elegance. Its name is the *Dahlia glabrata*, and the seed of it may be procured from Mr. W. Thompson, of Ipswich. It is a small single *Dahlia* from 1½ to 2 inches in diameter, of colours varying from deep purple to milky white. It is charming in a bouquet.—T. S.

GARDENERS EMIGRATING TO NEW ZEALAND.

NEW ZEALAND consists of three islands, two large and one small; the larger are separated by Cook's Strait, a channel about 50 miles broad—distance about 1200 miles from Australia. New Zealand contains nearly 75,000,000 acres, or is about as large as Great Britain and Ireland. It contains nearly 50,000 natives, and from 90 to 100,000 Europeans; but as ships are weekly arriving with emigrants this population cannot be exactly stated. The climate is considered as healthy, or rather more so, than that of England, January being the hottest, and July the coldest month. There is more wind and rain than in England, but fewer wet days, as the rains are heavier than here. The summer is a little warmer, and the winter much warmer than in England; mean temperature of the New Zealand summer 65°, that of the winter 50°; but in so large a place it varies, the north island being a few degrees warmer than the south. Winter is not much colder than a cold wet English March. Our common bedding plants, as *Geraniums*, *Verbenas*, &c., will live out all the winter in the north island, and in the south will survive with a little protection. There are no wild animals hurtful to man. Minerals are rather plentiful, but not much worked as yet, as wood is the chief fuel, and it is dear. Greater part of it is found in the north island. Most trees, shrubs, fruits, flowers, and vegetables, that will succeed in England will do so in New Zealand; and others that require a warmer winter than ours may also be grown. Gooseberries and Currants, particularly Black Currants, do remarkably well. I find Quick Thorns are used, mixed with Furze, for hedges. Seeds of all kinds that are good should be taken, as good seeds are always valuable here, and doubly so there. Food is dear, bread 1s. 4d. per four-pound loaf, meat 8d. to 10d. per pound, and house rent very dear.

A handy man would perhaps receive 8s. per day—at least my friend does, but he is not afraid to rough it. Such a man is almost sure to get on if sober and industrious, although it is common to hear people say "I wish I were in England again." People must make up their minds to rough it for a year or two, and the wife must have good heart, and deny herself many little things for a time, such as comfort in furniture, &c., unless the married couple have a good sum of money to furnish with. My friend says, if the wife has good heart nearly all the battle is won. My friend, after being there some time, bought a quarter of an acre of land for £50, paid £17 down, and £33 by instalments, and paid interest at the rate of 26 10s. per cent. He afterwards borrowed £100 at £12 per cent, and built a cottage costing £150; land, building, fencing the ground, and the titles, cost £221. He paid in a little over four years £130, or about £30 per annum, but has two children that are helping him; one, a girl, sixteen years old, is getting £20 per year with board and lodgings. His advice is, to any one going out, take all you can, tools, furniture, clothing, &c., as they are mostly double the price they are in England. It is a very serious journey, and he would not advise any one to go without much thought about it, and a determination to be sober and industrious, and rough it for a year or two. A character from the last master, as well as one from the clergyman, are very valuable. Schools and places of worship near towns are good, as well as pretty plentiful. He advises me not to leave my place to go out, but should I have left, and have a difficulty in getting another situation, to venture out.—W. C.

PANSY.—It is no doubt true, that the word Pansy is derived from the French *penser*, to think; although Ben Johnson spells it *pownes*, Spenser (Shep. Cal., April, l. 142), *pawnee*; and Milton, in *Comus*, speaks of *pancies*. I agree, however, with Grime in thinking Dr. Richardson's account of the origin of the name unsatisfactory. I should be inclined to

regard Pansy as one of a long list of names bestowed by the quaint fancy of our ancestors, who, by fixing, often perhaps arbitrarily, on certain flowers to express certain ideas, constructed a language of flowers. The grotesque appearance of the full-blown Pansy may, perhaps, have led to the imposition of the name, but only because it may have led to the selection of the flower as an emblem of "thought." At any rate *Ophelia* (Shakspeare's *Hamlet*, Act IV. Sc. 5), uses the Pansy as an emblem:—"There's Rosemary, that's for remembrance. Pray you, love, remember; and there is Pansies, that's for thoughts." Quenay, the physician of Louis XV., and leader of the Economists, was called by the monarch his "thinker," and granted for armorial bearings three flowers of the *pensée*. The following is a list of some of the names by which the Pansy goes with rustics and old writers:—Heart's-ease—Herb Trinity—Three-faces-under-a-hood—Kit-run-about—Cuddle-me-to-you—Love-in-vain—Kiss-behind-the-garden-gate—Jump-up-and-kiss-me-my-love—Love-in-idleness. Under this last name Shakspeare speaks of it in the famous passage, *Midsummer Night's Dream*, Act II. Sc. 2:—

"Yet marked I where the bolt of Cupid fell;
It fell upon a little western flower,
Before milk-white, now purple with love's wounds,
And maidens call it 'Love-in-idleness.'"

In the description of the effects of the flower that follows, there is evidently an allusion to the emblematical signification of the Pansy:—

"The juice of it on sleeping eyelids laid,
Will make a man or woman madly dote
Upon the next live creature that it sees."

And again below:—

"And with the juice of this I'll streak her eyes,
And make her full of hateful fantasies."

German rustics, I am told, call the Pansy *stiefmutter*, step-mother.—FABRUS OXONIENSIS in *Notes and Queries*.

THE IRISH POTATO CROP OF 1864.

THE Irish Potato crop of 1864 is, perhaps, the finest that has been turned out of the ground for a quarter of a century. In some parts of the country where old lea lands were broken up and planted last spring the produce has reached a point hardly ever before attained. One instance we have heard of is that of a Down farmer who planted a small field with the variety called "Skerries," and the produce raised amounted to 1000 bushels, being at the rate of 600 bushels to an Irish acre. Other cases have been recorded this season where a still larger turn-out has been taken up. In the palmiest days of Potato-growing, and ere the blight was heard of in Ireland, the average of 250 bushels of Potatoes, fit for market, to the statute acre, was thought a fair crop; for even then there were always found considerable quantities of inferior and unsound tubers which were thrown aside to be used in cattle feeding. The care taken by growers for some years past, as well in the selection as in the change of soil for their Potato lands, has had the best effect on the crop; and, after long perseverance in the right path, the Irish farmer has reached a degree of success unequalled in the history of agriculture. It will be recollected by those who paid any attention to the subject that for a great many years before the setting in of the Potato disease it was not unusual for farmers to continue planting as seed the same variety of Potatoes, and this course was continued until the root had reached the highest degree of excellence as an article of food. In proportion, however, as some varieties of the article excelled in quality for table use, their value as seed declined; and, when planted season after season, the natural vitality gave way, until at length direct disease came on the crop and general destruction followed, bringing want and misery to the doors of thousands of the peasantry.

The old habit of living half the year on the produce of his Potato plot has ceased to be the rule of the cottager in every part of Ireland. He no longer depends on the turn-out of a precarious crop for his subsistence. One of the results of the famine season, with all its dread realities, has been to familiarise the masses of the people in this country with a class of food much superior to that with which their fathers were accustomed to be content. If, therefore, the Potato

lands were again to be visited with the blight which made such havoc among them, the effect would now be much less serious than it was eighteen years ago. As it is, the blessing of abundance will prove most advantageous this year, not only to the people as food, but to the farmers as additions to their material for the stall feeding of cattle.—(*Banner of Ulster.*)

JAPANESE PLANTS AND CULTURE.

Kanagawa, June 21st, 1864.

So much has been written by others about the natural products of Japan, that little remains to be said, having reference entirely to the limited range foreigners are permitted access to. Mr. Fortune's book being especially devoted to such subjects, is, of course, the most complete. Hodgeon, in an appendix to his book, has a catalogue of native plants which I have not had an opportunity of examining. Mr. Veitch contributes to Sir R. Alcock's work valuable notes on the plants of Japan and its agriculture. He has, however, fallen into some few errors, which it may be as well to correct.

Among the plants enumerated as growing wild are Nerium oleander, Vinca rosea, Balsamina hortensis, Celosia cristata, and others, which are undoubtedly all introduced; certainly they are not found growing in a wild state in this neighbourhood. In another place he speaks of wild Strawberries, probably referring to a Potentilla bearing a profusion of tasteless fruit, very much resembling a small Strawberry.

In my last I gave the names of some exotic plants cultivated by the native gardeners. To these are to be added the Chinese Hibiscus, Pomegranate, Echinocactus Eyresii, and Epiphyllum, Justicia carnea major, a Quisqualis, Myrtus tomentosa, Tecoma jasminoides, Sago Palm, Oxalis Bowiei, Ardisia crenulata, and another species of which there are a dozen varieties, with variegated and curled foliage, with red and white fruit. They are entirely unique, and, indeed, I have seen no more valuable acquisitions in variegated plants, or any possessing greater interest than these as most beautiful additions to the already numerous list of hothouse plants of that character. These exotics could only have been received from the Dutch and Portuguese in early times; and considering the limited intercourse allowed with foreigners, they are evidence that the florists of Japan are not without enterprise in their business, and ready to avail themselves of every opportunity of adding rare and beautiful plants to their collections.

I was surprised one day, on showing a prominent Japanese merchant a representation in stone of some foreign Pears, to see that he recognised the fruit, and to hear from him that a few trees were growing in the garden of a doctor at Miaco. I felt inclined to doubt his statement, thinking he was confounding them with the native varieties. He had, however, another name for them, and insisted on the correctness of his knowledge; also stating that the M.D. used the fruit for a medicine—an excellent way of disposing of his crop at remunerative prices. If they are foreign Pears, it is singular they have not been distributed.

One cannot help feeling a regret, apart from commercial interests, at the mutual consents given by other governments to the closing, for the present, of Kioto, the port of Osaka, near Miaco. That city is the Paris of Japan, wherein is collected all that is rare and beautiful. As many as are the floral treasures obtained here, I have not the slightest doubt many more could be added to the number, if we were allowed to explore the gardens there.

Not the least beautiful of Japanese plants is the Iris, of which many varieties are cultivated, from the purest white to the darkest blue, with all manner of intermediate shades and pencillings. I shall have a collection to send home the coming autumn; and if they survive and bloom, when you see them you will agree with me in saying their merits deserve that they should be classed as a florist's flower.

An addition to the conservatory will be Magnolia parviflora, a species after the style of M. pumila, only of a more robust growth, with pure white flowers of a delicious fragrance.

The Maple, in all its variety of variegated and dissected leaves, will prove to be among our finest acquisitions of ornamental hardy trees. The golden-leaved Pines are also to be

included in the list of decided novelties. I fear the difficulty of transporting them safely so great a distance will prevent their introduction for some time, or until some one can give personal attention to them on the voyage.

I flattered myself this spring that I had obtained from Yedo a collection of twenty varieties of Tree Peonies, having given a dealer here directions to obtain that number of the most distinct and best from out of forty or fifty he said were cultivated. I believe he performed his part to the best of his knowledge; but, unfortunately, he had to purchase them in bud, and when they bloomed I found only six or eight sorts. These, however, although not what I expected, will prove valuable as a source from which new sorts may be obtained by hybridisation.

A fine addition to the greenhouse is an Orchid very similar to, if not a species of, Bletia, in growth like the old B. Tankervillei [Phaius grandifolius.—Ed.], only more beautiful than that old favourite.

In passing the other day a small garden in an obscure situation, I saw growing a row of young plants of Indian Corn, with leaves distinctly striped with white. Of course I made a note of it, to procure seed at the proper season. Who knows but what, after a while, the vegetable gardener may invite you to look at his gold-blotched Cabbage, his tricoloured Lettuce, silver-margined Squashes, or striped Cucumbers?

The past winter has been exceedingly dry, and somewhat colder than usual. The spring too, has been more backward, but seasonable rains came on in time for the Wheat and Barley crops. The harvesting of the last is nearly over, and that of the Wheat will soon commence. Farmers are now also busy transplanting Rice from the seed-beds to the paddy fields. This work, although not laborious, would, to those who perform it be exceedingly unpleasant, as those who perform it have to wade all day long knee deep in water. It is chiefly done by women and boys, the men performing the severer labour of preparing the fields for the reception of the plant. Mr. Veitch says the transplanting is done in April. He probably refers to sowing the seed in nursery-beds.

Immediately after the grain crops are harvested, no time is lost in sowing Cotton, Sesamum, Buckwheat, and Sweet Potatoes. Their system of liquid manuring enables them to plant at once, without any further preparation of the soil than simply opening the drills for the reception of the seed. They practise sowing seed very thickly—I should think twice as much as is necessary, the surplus being just so much grain lost. Millet and Maize are both transplanted, but neither to the extent to entitle them to the name of a field crop. Potatoes are in blossom, and are now looking fine. The late rains will aid them very much in producing a large crop, which will be wanted to help to feed the small army of foreign soldiers now gathering here for the purpose of reconciling the Japanese government to the inevitable change that must take place in their policy towards other nations, or, in other words, bayonet reconciliation. Not the least consideration with myself is, that in the end freer access will be permitted to other portions of the country.—T. Hogg.—(*American Gardeners' Monthly.*)

ENVILLE HALL.

(Continued from page 356.)

PLEASURE GROUNDS.

As we return from the kitchen garden and cross the roadway already referred to, we might enter the flower garden and pleasure grounds of 70 acres by the post-office private entrance (4), close to Mr. Craw's residence; and having passed the three lakes termed the conservatory pools (20), we would obtain, as far as the inequality of the ground will permit, a bird's-eye view of the whole up to the extreme south-west point, where the pagoda is placed some 200 feet above the level of these pools. With great undulations (one of the chief charms of these gardens), the grounds as a whole rise sometimes gradually and at other times abruptly from this level to the boundary woods and sheep-walks beyond. A line from the mansion on the south to beyond these pools on the north, and not distant from the private road, might be considered the base of an unequal-sided triangle, which

formed the greater part of the dressed grounds; the pagoda standing in the acute angle opposite the base, and the sea-horse pool and Jordan's pool, with their splendid fountains, being on the south side of the triangle. Such, we think, would be the best entrance for a stranger with little time to spare, and who wished to carry away with him the preponderating ideas of the vast and the magnificent as well as the beautiful.

But to obtain anything like a clear idea of the diversified interest of Enville, we would advise the stranger to do just what we will attempt to do with our readers—take them with us, and enter by the same bronzed gates that admit the general public (1a), without going so far as the entrance (1), that leads to the mansion (2), as gardening rather than architecture is our theme.

Opposite the entrance is a rabbit-yard and aviary (3), both in excellent condition, and furnishing endless amusement and instruction to those who, like Lady Stamford, are partial to the study of such departments of natural history. The interest of these places is greatly increased by the rabbits not only having every convenience, but full opportunity for holeing and burrowing, and by many of the birds showing off the brightness of their plumage to advantage from being allowed ample space and protection among the sombre Yews and other evergreens that separate these yards from her ladyship's garden (6), and her dove-house (16), which is equally sheltered and interesting.

But as flowers are our object at present, we enter a walk that runs northward again, separated by a wall from the roadway, called the Rose walk, and beside it is a straight ribbon-border (5). The wall is covered with Wistarias, Jasmines, Honeysuckles, &c. Then climbing Roses are festooned, and half-standard Roses in a line in front, the ribboning being then Brilliant Geranium, Aurea floribunda Calceolaria, Lobelia speciosa, and Cerastium next the grass verge. This border was very nice as the first dish of the banquet.

A turn to the left from the middle of that ribbon walk brings us to Lady Stamford's flower garden (6), behind the aviary. This, though most simply arranged, is interesting as almost the only attempt like combination or massing of groups to be found in these gardens. The garden is centered by a large elevated basin fountain of the shell pattern, surrounded by eight circular beds of good size. Four of these beds were filled with blue Lobelia, with a broad edging of a pretty pink Verbena pegged down; and the other four, placed alternately with these, were filled with Countess of Warwick and Christine Geraniums, and three rows of Golden Chain next the grass. The Golden Chain does admirably in these gardens. A horseshoe or semicircular ribbon-border, next the Yews and evergreens, surrounds the half of this garden, and was thus planted, beginning at the grass: Lobelia speciosa, Aurea floribunda Calceolaria, Emperor of the French Geranium, Hendersonii Geranium, and standard Roses in front of the fine bank of evergreens.

This little garden is open to the walks on the north and west sides, with the exception of some small circular beds (represented thus in the plan . . .), about 3½ feet in diameter or less, at something like regular distances near the sides of the walks, each centred with a Rose or Humea, and variously filled with bedding plants. There are several hundreds of these small beds over the ground, and all we saw were filled with great taste, though in some cases it seemed to us that their absence would have been more gratifying than their presence, as interfering with breadth of view and confusing rather than giving repose to the eye.

On the open side of this garden is a fine specimen of the Venetian Sumach (*Rhus cotinus*), which, though perhaps not more than 10 feet in height, is 89 feet in circumference of head, and must have been a splendid sight when covered with its feathery spikes of bloom. Though originally one plant, some of its branches had bent themselves to the ground and thrown up stems, but this is not seen without examination.

From this garden a walk leads to the north front of the mansion, passing the dove-house (16), itself backed by a noble mass of Portugal Laurel, and fronted nearer the mansion with a splendid plant of the same (15), that has layered itself a little like the Sumach and is fully 200 feet in circumference of head. This is paired on the other side of the walk by a fine *Rhododendron ponticum* (14), the head

of which is 185 feet in circumference as it sweeps the ground. That is the measurement given to us as correct by one of Mr. Craw's assistants. Our own measurement from stepping round it made it 1 foot more. Just opposite the dove-house is a fine Purple Beech, with its branches sweeping the lawn, and there are several other nice trees and masses of evergreens besides. Now, though flowers are attractive, place them where you will, we must own that we would rather have seen none of these small beds by the sides of this walk from the mansion, and for these reasons: Their smallness detracts from the dignity of the mansion; they tend to fritter away by their very regularity, instead of enhance, the magnificence of the fine specimens of trees and gorgeous masses of shrubs, more picturesque than formal in their outline, and by the eye being accustomed to flowers, though in small masses, the visitors from the house would be less astonished and delighted by the large circular masses of bloom in Lady Stamford's garden, and in the five or six assemblages of these large circles that stretch in different departments, each with its own distinctive name, from Lady Stamford's garden to the conservatory pools, and westward beyond the conservatory. If any possible improvement as to floral display is to be effected at Enville, it will be done more by aiming at concentration than diffusion—more by giving increased relief and repose, and therefore augmented variety, than by the bewildering repetition that is apt to terminate in confused sameness. Great minds there may be to whom nothing is impossible, but to the most of us there is a difficulty in comprehending and analysing the attractions of different objects when presented to our view at one and the same time.

Returning to the north-east side of Lady Stamford's garden, we enter on a winding walk that leads to the conservatory pools (20), passing on the left hand three of these departments or gardens for flowers, grouped with large circles in the middle and small ones round the outside. In the first department, containing a fine specimen of *Pinus macrocarpa* (10), we counted twenty large circles, and about the same number of smaller ones. We cannot even attempt to describe the planting of these, or the 160 beds in all, ranging from 18 to 23 feet in diameter, but we will ere long give the planting of a few as an example. The second department, among other evergreens has a fine specimen of *Thuja aurea* (11), and a large *Wistaria sinensis* now trained round hoops, and which generally blooms well. The plant was formerly trained against the walls of an orangery which has long been removed.

On the right-hand side is one of the finest features of Enville in a floral point of view, in the shape of the post-office ribbon-border, so called because extending from Lady Stamford's garden to that private entrance, running nearly parallel with part of the straight ribbon-border already referred to (5), and with the private road, but so thoroughly blocked out from both that you might well imagine there were no such things near you. Beginning at the grass verge this border was planted as follows: Two rows of Golden Chain Geranium; a broad band of Lobelia speciosa from seed; a fine row of Little David Geranium, dwarfier and more free-flowering than Tom Thumb; a fine thick row of Flower of the Day Geranium with the flowers nipped off; a row of Perilla, with standard Roses at regular intervals; and the back row Hollyhocks, chiefly grown with a single stem, and which showed to great advantage from the dark mass of evergreens behind them, relieved, however, by the varied hue of the finer-foliaged Hollies. Golden Chain was thoroughly at home in the front belt, and to make this three thousand good plants were required. This ribbon was a gem.

The pools to which we have now come are different, but communicating with each other. All are well supplied with waterfowl, and their banks are well fringed with plants, chiefly *Rhododendrons*, Willows, Alder, &c., except the south and west banks of the upper pool, which thus bring the water in view from the conservatory. The east side of that pool, besides the evergreens, was also fringed with some herbaceous plants, as Variegated Balm and Variegated Alyssum; but any thoughts of their appetitiveness for the situation were dispelled by the proud demeanour of the swans, who followed us all round the upper pool, no doubt disputing our right to visit their domains. Between the



middle pool and the east end of the conservatory is a fine mass of evergreens, fronted with Rhododendrons. On the south side of the upper pool close to the water is a fine mass of Oaks; and on the west side is a fine old gnarled Oak, with the top branches beginning to decay, telling of the hundreds of years it has braved the tempest as well as the breeze (28).

From the vicinity of this Oak (28), a good view is obtained of the north side of the conservatory, and the pinnacles of the museum and smoke-tower; and direct west on to the owl and eagle-house, and thence to the pagoda is comparatively open lawn, with dense groups of evergreens, and Pines, &c., thinly scattered and enlivened by but few of the large circle flower-beds which so bewildered us near the fine ribbon-border. As to the eagle-house (27), we may here say, that it is a fine, strong, rustic structure surrounded by stout wire fencing. There are fine specimens of both kinds

of birds; but what rather surprised us was the fact, that though there are large holes made in the artificial rock for the denizens to retire to when they think proper, especially in severe weather, they hardly ever enter them; and even the owls prefer building their nests and hatching their young on the ground in a sheltered place between jutting stones, instead of going into the deep recesses which we would have thought they would use.

The conservatory (19), is a very elegant building combining great artistic and architectural taste with much fitness for the object contemplated. It was designed and erected by the late firm of Messrs. Gray & Ormson. It is in length 160 feet, and in breadth 79 feet. It stands upon a raised platform some 20 feet above the level of the upper pool, and has a broad gravel terrace all round it, graced with fine pyramidal plants of Sweet Bay in tubs. These fine Bays are placed under protection in winter. The stoke-



CONSERVATORY AT ENVILLE.

holes are reached from an opening, close to the steps, in the sloping bank on the north side of the terrace. Three boilers are used, and 5000 feet of four-inch piping.

On the lawn at the base of this slope are placed six raised beds or baskets of an hexagonal or octagonal shape, their sides covered with bark, and these baskets were all planted in the mixed style; all attempts at artistic arrangement being thoroughly concealed. They afforded a relief after looking at the hundreds of flower-beds, so neat and trim that not a twig or a blossom seemed as if it could get out of place. We were reminded of what we have sometimes noticed in nosegay making—one person will take a long time to produce a desired effect, and after all the composition will be as stiff as a poker in its symmetry; whilst a young lady in a few minutes will go to her own border, cull a sprig here and another there, place them in position as she goes along without making great pretensions to aiming at taste, and yet eight out of ten people would prefer the

nosegay thus huddled together just because there was more of the natural than the artistic about it.

The inside of the conservatory is not yet finished, as it is desirable to allow the ground full time for sinking and becoming consolidated before putting down beautiful pathways. On this account little except a few creepers are permanently planted out. There is to be a wide pathway or road down the centre, and narrower ones along the sides, and by the sides of these paths the pipes for heating are placed in chambers, with open iron-grating work over them. The main supports of the building are of iron, and the main columns are hollow to act as drain-pipes from the roof. All the rest for the reception of the glass except the domes is formed of wood. The ventilation is ample, and the tops of the domes are easily opened and shut by a wire rope concealed among the climbers round the pillars. About the middle of one end were two fine plants in tubs of *Araucaria excelsa*, which will soon be through the roof if not provided

for elsewhere, and to balance these on the other side were two fine plants of *Yucca*, or *Dracena*, with good clear stems and large heads of green leaves. *Camellias*, *Azaleas*, *Oranges*, *Fuchsias*, &c., made up the most of the present furnishing, and the prominent creepers and climbers dangling in profusion from the roof were *Tecomas*, *Acacias*, *Passifloras*, and *Tacsonia mollissima*.

We forgot to mention, that the smoke from the furnaces of this conservatory is conducted underground to an elegant tower at the north-east corner of the museum (21), and at a short distance from this museum is Lady Stamford's dove-house (22), where an interesting collection is kept.

From the middle of the terrace on the south front of the conservatory a walk, with flower-beds on each side, leads up to an open lawn on which are some wonderful Lime trees, of which more anon. This walk if it had gone straight on would have landed at a fine *Rhododendron* close to the mansion. At the centre of this walk there is a beautiful basin and fountain with fine specimens of pyramidal Sweet Bays set round it in tubs on the gravel. The basin is deep, but to prevent waterfowl from getting in and possibly not getting out, strong wire-netting is placed across some 15 inches or so below the surface of the water. We have thought that the large beds, some 20 feet in diameter, placed on each side of this walk on the south front of the conservatory might help to give an idea of the system of planting. We will just premise then that the opposite beds were planted alike to balance each other, as well as to contrast with their neighbours, and that in the first row next the walk there were four beds; in the second and third rows three beds; and these were mostly placed so that the beds in one row angled the beds in the other row next it.

In the first row then, beginning at the conservatory, the opposite sides of the walk being the same, the first bed was Little David Geranium, edged with Variegated Alyssum; the second bed *Lobelia speciosa*, edged with Golden Chain Geranium; the third bed the same, being on the opposite side of the fountain; and the fourth bed was a repetition of the first. In the second row, the first bed was *Hendersonii* nana Geranium, edged with Pink Pearl Geranium; second bed, Rosy Queen Geranium, edged with *Ageratum* kept low; third bed, *Hendersonii* Geranium, edged with Pink Minimum Nosegay. In the third row, the first bed was Purple King Verbena, edged with Lord Stamford Verbena, a white-leaved variegated with pink flowers and much valued; second bed, Emperor of the French Geranium plunged in pots, edged with Purple King; third bed, *Amplexicaulis Calceolaria*, edged with *Amaranthus melancholicus*, the latter doing well; and so on with the other rows. These beds from their very massiveness looked very well. All these beds and also the other circles were raised in the centre so as to make half, and some fully more than half a ball, and all were densely filled.

Among the many fine beds, it may not be amiss here to mention a few that struck us as being particularly fine; and here we must, perhaps, mention first the circle 23 feet in diameter, near the lower conservatory pool, planted with Trentham Rose Geranium, and densely edged with *Centaurea candidissima*, and a bed of the same size filled with a fine dark *Petunia*, named Lord Stamford. Then the following beds—*Amplexicaulis Calceolaria* and *Ageratum*; again with *Amaranthus*, and again with a strong blue purple Verbena; *Gazania*s, very fine, with blue *Lobelia*; Brilliant Geranium with Purple King Verbena; Cloth of Gold Geranium and Purple King Verbena; Purple King and Lord Stamford Geranium; Pearl Geranium, a dwarf pinkish Nosegay, with Madame Vaucher; Alma Geranium with *Trifolium repens nigrum*, a pretty bed; Lord Stamford Geranium with the above *Trifolium*; *Lobelia speciosa*, strong plants from seed, edged with *Gazania splendens*; Geranium Rosy Queen with *Ageratum*; Trentham Rose Geranium and *Cineraria maritima*; Mrs. Pollock Geranium and *Lobelia speciosa*; Purple King Verbena, and Lord Stamford Geranium, &c. Nothing surprised us more than the extreme brilliancy of the *Amplexicaulis Calceolaria*, which made it a striking feature all over the grounds. It used to be equally fine with us, but owing to the drought and no water to help it, we had but few flowers after the middle of August.

On second thoughts we think it better to defer some concluding remarks—a few words on the style of arranging these huge beds.

From the south of the conservatory a fine peep is obtained of the top of the museum, and the elegant smoke tower, surrounded with Ivy, and banked up with huge banks of evergreens; and between the museum and the fine Lime tree, the eye passes far beyond the dressed grounds to the arched gates that lead to the drive in the woods, that takes onward to the more elevated sheep-walks. In the front of the above bank of evergreens at the museum, extending a long way westward, is a narrow ribbon border of three rows (29), *Manglesii Geranium* next the grass, Brilliant behind, and then *Amplexicaulis Calceolaria* next to the bank of green and telling very much by its bright yellow for a great distance.

Of the museum itself, though we took a few notes, we must say nothing of its birds, and fishes, and animals, and shells, and fossils, and ores, and minerals, and kinds of rocks, but from its pinnacled turrets, and pretty oriel windows, and its position on a knoll, and its background of trees and evergreens, it forms a fine feature to the grounds from many distinct points of view.

R. FISH.

(To be continued.)

WORK FOR THE WEEK.

KITCHEN GARDEN.

KEEP the heaps of compost well turned over, as the time is approaching when every advantage must be taken of frosty mornings to wheel it over the land. As a general rule, ground that is very deeply trenched should be manured after the trenching, and the manure forked in, except in the case of its being intended to be cropped with tap-rooted plants, which will require the manure to be trenched-in deeply, and not incorporated with the surface soil. Trenching all vacant ground must be vigorously followed up, taking care to trench-in all green and decaying refuse, which is better than throwing such materials in a heap to decay, which entails a positive loss of fertilising matter. Broccoli, it is now high time to perform the operation termed "laying" with the stock of spring Broccoli. A tender vegetable will endure severe weather better when deprived of a portion of its succulence than when overtaken by frost when in a luxuriant state. Cauliflowers, those already headed to be carefully taken up and stacked in a dry pit, or under the protection of a wall, where a thatched shutter may be employed in unfavourable weather to ward off the wet. *Endives*, as many as possible of these plants and of *Lettuces* should be transplanted into frames, where they may be at least protected from rain. Sudden frost succeeding rains will more injuriously affect advancing salads than any other possible circumstance of weather. Mushrooms, take advantage of wet days for making fresh Mushroom-beds, and clearing out those that are spent; also, collect and prepare droppings for forming fresh beds by spreading them in a shed and turning them every day until they are sufficiently dried to prevent excessive fermentation after putting up. Look over root-stores occasionally to see that nothing is going wrong. Take advantage of a dry day to earth-up Celery, which now should be done effectually, as we are uncertain how soon frost may set in. Clear off all decaying leaves, &c., and stir the surface of the soil on dry days among growing crops.

FRUIT GARDEN.

Gooseberry, Currant, and Raspberry pruning and planting should be in progress. An adequate quantity of cuttings of the first two should be put in every season to provide for possible losses. The due preparation of borders for the reception of fruit trees should be completed, and the trees planted in the course of the month. Pruning and nailing may be commenced, a judicious system of stopping in the growing season renders the first-named operation a comparatively light and easy task.

FLOWER GARDEN.

Make the garden look as pretty and lively as possible during the winter, and this can be done with comparatively little trouble and expense after the first outlay, by filling those beds which are not planted with bulbs, or sown with hardy annuals, with dwarfed specimens of shrubs. The beds near the house would look best filled with *Laurustinus*, *Aucuba japonica*, Golden and Silver-leaved *Hollies*, *Arbutus*,

Berberis, evergreen Rhododendrons, and Box; those at a greater distance with Portugal and common Laurels, Arbor Vite, Phillyrea, &c., filling each bed with one distinct sort. We have frequently seen shrubs kept in pots for this purpose, but we consider this as unnecessary trouble. In removing them from their winter to their summer quarters, plant them in prepared beds in the reserve garden, and by regularly pruning back the summer growth of some, and pinching off the ends of shoots of others, a compact dwarf shrub will be obtained, and thus be in readiness for another year.

GREENHOUSE AND CONSERVATORY.

During the short dull days and long nights of this month, great care must be taken with all plants that have finished their growth to keep them free from all excitement, and pretty dry at the roots. *Chrysanthemums* will now be decorative plants here and will require attentive watering. Although they are very showy plants, and to see them arranged as to colour, size, &c., to advantage, they would require a house to themselves, nevertheless, it is necessary to be cautious that they are not introduced to such an excess as to overcrowd other and more valuable plants. All dead leaves to be picked off. A gentle fire to be applied during the day, which will allow of a free circulation of fresh air being afforded, and, by closing up early in the afternoon, will produce sufficient heat to resist the encroachments of ordinary frosts at night. Even when severe frosts occur, night coverings, if possible, should be applied in preference to fire heat. All hardwooded New Holland plants, such as *Eutaxias*, *Boronias*, *Pimeleas*, &c., are very susceptible of injury from cold drying winds; therefore, if they are wintered in the same house with the more hardy sorts of greenhouse plants, they should be accommodated with a situation free from draughts, with plenty of air from the top sashes in fine days. Choice *Fuchsias* that have been trained with a handsome leader should be preserved in the greenhouse, to be supplied with plenty of air and light to keep the wood sound and healthy, in preference to storing them away under the stage, or any other out-of-the-way place. Creepers to be closely tied that they may not interfere to an injurious extent with the amount of light in the house.

PITS AND FRAMES.

The cheapest and most effectual coverings for pits and frames are wood frames the length and width of each light, thatched 2 inches thick with wheaten straw. The frames to be made of well-seasoned deal, the sides, ends, and centre bar to be 1½ inch thick by 2½ wide, to be morticed and glued together, and small bars 1 inch square to be let in at about 1 foot apart to support the straw. Any two handy men will thatch one in a few minutes. A more temporary framework may be formed of shingles such as are used for making sheep-hurdles. Such coverings are neater, cleaner, cheaper, more easily put on and taken off, and more efficient than mats or any other covering at present in use. Indiscriminate watering must be avoided in the treatment of stock in pits and frames. Well-matured plants with no stagnant water about the roots, will resist such a low degree of frost as would be immediate death to others of the same sort that are succulent, of immature growth, and saturated with moisture. *Hyacinths* may still be planted in pots or put into glasses, and those which have been brought forward according to previous directions, may be forwarded in heat if required for early bloom. They can also be grown in pots of moss kept moist.—W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

HAVE done little here, being anxious to collect turf and soil for future composts whilst the weather remains dry, as that makes such a difference in the carriage. Preparing for future planting, and especially opening holes for transplanting good-sized Larches and other forest trees, as the holes being opened and the soil spread out, the latter will have the advantage of the first rains that fall, so that moist earth may go against the roots at least. The same should be done as respects preparing to plant fruit trees. In our circumstances it would be folly to plant anything until the ground be more moistened, or there be plenty of water at hand to supply the deficiency. In making the holes for

forest trees we never saw such dryness, and to great depths. Our prophecy in summer as to wells becoming dry in November is being too much verified from the accounts we receive from many quarters; and also, as we stated then, the taking the water in August somewhat freely, and the using it with great care and stint, have made little or no difference. Use it, or not use it, the water in the well would sink to the general level, and when dry we must either sink the well deeper or wait until the water rises.

The nearest running streams to us are 3½, 4, and 5 miles distant, and we are from 250 to 300 feet above them. As these streams sink so do our wells, as we presume none of them are deep enough to go beyond the chalk formation. Many of us rejoiced in the water we obtained by the last rains, and we would just throw out the hint to those whose wells are low or dry to use even the rain water with care and economy, as if we have a wet winter, and get plenty of water in our tanks and pools, the spring will have come before these rains tell much on our wells. There is an old axiom, that almost every housetop will catch enough of rainfall to meet the wants of those who inhabit it; but then how few houses have tanks or reservoirs sufficiently large to hold the whole of the water that falls in the case of heavy rains. Even in the last rains there were many thousands of gallons that went from our walks and roads that would have been worth almost anything in summer. Many summers like the last will make us more careful of the water that falls from buildings at least, and we know of several instances where all overflows from the soft-water tanks will not be allowed to escape by the main drain as heretofore, mixed with all the house sewage, but will have a separate drain for itself into a reservoir, that shall be filled with pure water only. Instances also occur of parks and fields being so drained that the water shall be first emptied into a reservoir before the overflow finds its way into ditches or other outlets. As an instance of the scarcity of water this season, we may mention that buildings stood still for want of water to make mortar, or were continued at a ruinous cost to the contractor from having to cart water from a distance of four miles, and up and down steep hills.

With all the dryness, however, the late rains have brought up the Wheat beautifully, and vegetables are thriving well when once established. As a measure of precaution broke some leaves over the heads of *Caniflowers* to prevent a slight frost injuring them. Hoed and cleaned among young Onions, Spinach, Cabbages, &c. Looked over seed Potatoes, took up Carrots, planted Shallots and Garlic, earthed-up Celery, especially one bed of tall strong red, that requires endless work in comparison with the Dwarf Incomparable. Cut a good many of the Red Cabbage for pickling. Switched the walks hard to prevent them becoming a harbour for worms and slugs.

FRUIT GARDEN.

Looked over gathered fruit, removing any that are specked, just leaving a little air on the house, to prevent too much clammy sweating. We lately said that Pears ripened under glass were rather deficient in flavour, but some forward specimens, Marie Louise and Glou Morceau, were pronounced most excellent. We fear we overdid the little trees with bearing. A small garden of dwarf trees would be most interesting. Say a hard concrete bottom, soil 20 inches deep, trees well pinched-in, planted 5 feet apart, in rows 6 feet from each other, and a frame put over, so as to permit of covering with frigi domo. Heavy crops, summer pinching, and surface manuring, would keep these healthy and fruitful with but little necessity for root-pruning or frequent replanting. Pruned as we could find an opportunity, but wished we could do more, as it is more comfortable doing it now than in winter; but where attention could be given in summer, the pruning now will chiefly consist in removing or shortening the late summer and autumn growths.

Here is just one of those cases in which the amateur or the nurseryman who chiefly affects one department of gardening, should, and so often does, beat the gentleman's gardener. In the one case, everything may be done at the right time; in the other, one sort of work must often wait for another, unless in those extraordinary cases where labour is very plentiful, and one man, or set of men, may be set to attend to one department. Even a little extra work or job

will often throw all arrangements out of gear until the leeway can be brought up again.

In the orchard-house we swept and cleaned the leaves from the earliest part, and moved the trees in pots, setting them closer together, and will put litter among and over the pots by-and-by, and thus placing them close together will give room for lots of Geraniums, &c., from the beds, and for Cauliflower, Lettuce, and Endive for the winter. These trees have all been syringed with water at about 170°, after the smoking with Laurel leaves that we gave them. After the smoking we noticed some Ribston Pippin trees in pots, that had some American blight (*Aphis lanigera*), on them that did not seem killed by the smoking, the woolly matter, no doubt protecting them. These we have set out of doors as a preparatory step to thoroughly cleaning them top and roots, for on examining the roots we found there was as much blight below the soil as above it. We shall use strong lime water, or ammoniacal water, if we can obtain it, and then paint with Gishurst or sulphur and clay. We never had this insect on Pear trees but once, and that was on an Althorp Crasanne, and it existed at almost every bud. It had several scourings with lime water in the autumn, and was painted with clay and sulphur in winter, and the insect never made its appearance again. Turpentine, and even oil, will kill all the insects they touch, or shut them up from the air; but both are so far injurious to the plants. Thick lime wash would be as effectual for shutting them up from air for a time, and would do no harm.

Mr. Rivers, at least, ought to have the credit of doing away with the idea, that a man could only plant Pear trees for the benefit of his grandchildren. These Apple trees, and some Plums and Pears, were procured, as far as we recollect, as maidens, in the spring of 1863, and then potted. They were grown out of doors that year in small pots, and were fruited in-doors in the present season, and just bore too heavily to perfect a forest of buds for next season, but with a more moderate crop, they would continue year after year. Even as it is, there will be plenty of buds for a crop. If deemed necessary, therefore, by station planting, root-pruning, or summer pinching, the plant that is budded or grafted in the season of 1864, may produce fruit at least in 1867, and often in 1866, if you wished merely to say that such a thing could be done. The fruiting so early would, however, like taking a crop from Vines some fifteen or eighteen months from the bud, render future crops from the plant a very problematical affair.

For other matters see notices of previous weeks.

ORNAMENTAL DEPARTMENT.

Did a little to keep the lawn and the walks passable, have too much in hand to attempt to go over them every day. Will defer a good thorough cleaning in all parts until the most of the leaves have come down. Ash, Lime, and Elm leaves are now nearly down, but those of the Beech stick as if glued with bird lime, and Oaks are as yet rather green. The very sight of the tops of the trees now, will tell at once the nature of the tree as respects its rooting. All those whose roots extend chiefly along the surface, as the Ash and the Elm, have shown long ago the ripening effects of the dry summer, whilst the deep-rooting Oak shows no great difference from its state in ordinary years. In the fruit garden the state of the foliage will also often give a good lesson. Thus, where it has fallen, or is in course of doing so, nothing is wanted but a little top-dressing to increase vigour if required. Where the leaves are still vigorous and green, it says plainly enough that the roots are going down deep, and might be the better if their points were nipped off to lessen the vigour.

Took up a number of Geraniums from the beds, and placed them thickly under cover until we have time to look over them. Took up and potted a number of large plants that formed the centre of the pyramidal beds. Talking of pyramidal beds, we hope ere long to describe some pyramids of *Calceolarias*, &c., at Bentley Priory that did thoroughly surprise us, and that made a grand contrast with the usual beds.

We have not had time to finish our *Calceolaria cuttings*, but will be satisfied if we can do so before the old plants are touched with frost. We are glad that a correspondent has drawn our attention to our description of putting in these cuttings at page 338. That description is all right enough, with this exception that "10" is printed for "2." The little

sentence that puzzles him should read thus—"This season we plant them in rows 1 inch apart, and the rows are nearly 2 inches from each other." Last season the rows were only 1½ inch apart, but that was rather close, as the rooted cuttings became a perfect thicket early in spring. Had we plenty of room we would give the cuttings more of it—say from double to three times as much—and then we might save ourselves transplanting until we turned the plants at once into the beds. Our practice hitherto has been to take up these thick-set *Calceolarias* in March, plant out in beds where we can give a little protection, lift with balls in May, and transfer to the blooming-beds.

Another correspondent asks if it would not be better to take up now and pot or plant under glass nice stubby plants from the beds? We say, No, except you wish to have large plants as centres, or to grow in pots for early spring and summer blooming. For symmetrical plants in beds we prefer plants from cuttings inserted now, and a score of cuttings may be placed in the room that would be required for a fair-sized plant. "AN OLD BIRD" tells us, "My *Calceolarias* were all struck in the end of September, long before you put one in. I saw your *Calceolarias* in September, and they were only passable, whilst mine were extra good. I mean to keep to early striking." By all means: a man is right to use the bridge that takes him safest over the stream. We have struck late for many years, and never missed a fine bloom in September and onwards until this season; and that we consider entirely owing, not to the time the cuttings were put in, but to the great drought with which we were visited. Our object in late striking is, that the plants may have as little check as possible, and yet be kept in a small space until May. Older plants, and plants curbed and checked, we thought we had proved were apt to wear out, or only yield leaves instead of masses of flowers in the autumn. We are thoroughly convinced that, had we a stream or a large reservoir of water near us, our *Calceolarias* this autumn would have been as good as they usually are; still, that is no reason why another plan may not be as good or better than ours in different circumstances. A sense of honour must insist on detailing the very plans used, and mentioning failures as well as successes, otherwise these notes could be of no value or interest whatever. We like to hear everybody's opinion, and still more their practice; for even if we cannot adopt all these modes, we may still have the advantage of knowing that "in the multitude of councillors there is safety."

All bedding plants are now kept rather dry—that is those struck lately, and a little hay and litter is in readiness to throw over them in a sudden frost, as we are not ready to take many into our fruit-houses as yet. Commenced clearing out the conservatory, and fresh surfacing and cleaning the pots to go there. Chrysanthemums with us this season will be late and we fear rather inferior, in consequence of keeping them for two months banked-up against the north side of a shed very much shaded by trees. As we could not give them any water, this was the only shift we could resort to to keep them alive. They now look fair after being exposed since the rain came. Cinerarias, Primroses, &c., have had all the air possible, with shutting up partially at night. Shortened the climbers in conservatory to give more light, and cut the leaves from lots of fine-leaved Begonias that the pots may stand in another house anywhere in the shade. Plenty of air will be required for Croweas, Leschenaultias, Diosmas, Boronias, Gompholobiums, &c., but if they are near the front glass, the air should not pour at once on the stems. It is safest in winter to give top air rather freely, instead of giving so much by the front sashes. Pots should also be frequently rung with the knuckles to see that they are not over-dry, as dryness now is the fruitful cause of so many Camellia-buds dropping before expanding. Azaleas should also now be kept free from thrips, and if there is room might as well remain in a coolish house before the leaves drop that are likely to do so. Stove plants to bloom in winter, as Euphorbias, Poinsettias, and Justicias, should now have less water and more air until the flower-buds appear, when more water, heated, may be given to encourage strength and size of flower. It will now be time to trim creepers and twiners in this department. In summer they act as one of the best shades; but now light will be the chief thing that we cannot command, and, therefore, every advantage should be taken to get as much as possible of it.—R. F.

COVENT GARDEN MARKET.—NOVEMBER 5.

The market continues well supplied, and continental arrivals are heavy. Pines are far from plentiful, and prices are maintained. Grapes are sufficient for the demand, and include Dutch Hamburgs, but being inferior to home-grown fruit prices are lower. New Lemons from Messina begin to arrive in quantity, and are of excellent quality; Oranges of the new crop are not yet coming in freely. Dessert Apples and Pears, both of the best and inferior quality, are very abundant; the former include Ribston, Newtown, Cox's Orange, and Golden Pippins, and King of the Pippins; the latter, Cruesana, Duchesse d'Angoulême, Marie Louise, Glou Morceau, and great quantities of common Bergamots. Some fine specimens of foreign Apples and Pears are now to be seen in the fruiterers' windows, consisting of Uvedale's St. Germain, under the name of Belle Angevine, Castille, Glou Morceau, and Easter Bourré Pears; and of Reine des Canals and White Calville Apples.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples.....	½	0	2	0	Welons.....	each	1	6	4
Apricots.....	do.	0	0	0	Mulberries....	punnet	0	0	0
Cherries.....	lb.	0	0	0	Nectarines.....	do.	0	0	0
Chestnuts.....	14	0	20	0	Oranges.....	100	10	0	14
Currants, Red...½	sieve	0	0	0	Peaches.....	do.	4	0	10
Black.....	do.	0	0	0	Pears (kitchen)...	bush.	5	0	10
Figs.....	do.	0	0	0	dessert.....	do.	1	0	0
Filberts & Nuts 100	lb.	80	0	80	Pine Apples.....	lb.	6	0	0
Coke.....	do.	70	0	80	Plums.....	½	2	0	7
Gooseberries.....	½	sieve	0	0	Pomegranates.....	each	0	4	0
Grapes, Hamburgs	lb.	1	6	5	Quinces.....	½	1	6	0
Muscats.....	do.	3	0	7	Raspberries.....	lb.	0	0	0
Lemons.....	100	5	0	12	Walnuts.....	bush.	14	0	20

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes.....	each	0	4	0	Horseradish... bundle	2	4	0	0
Asparagus.....	do.	0	0	0	Leeks.....	bunch	0	2	0
Beans Broad.....	½	sieve	0	0	Lettuce.....	score	2	0	4
Kidney.....	½	sieve	3	0	Mushrooms.....	pottle	1	6	2
Beet, Red.....	do.	1	0	3	Musl. & Cross, punnet	0	2	0	0
Broccoli.....	do.	1	0	1	Onions.....	bushel	2	0	4
Brussels Sprouts ½	sieve	2	6	3	pickling.....	quart	0	6	0
Cabbage.....	do.	1	0	2	Parsley.....	do.	4	0	0
Capecums.....	100	1	0	2	Parsnips.....	do.	0	9	1
Carrots.....	bunch	0	6	0	Peas.....	quart	0	0	0
Cauliflower.....	do.	4	0	6	Potatoes.....	bushel	2	6	4
Celery.....	do.	1	0	2	Radishes.....	do.	0	9	1
Cucumbers.....	each	0	6	1	Savoy.....	do.	1	0	2
pickling.....	do.	0	0	0	Sea-kale.....	basket	3	6	0
Endive.....	score	2	6	3	Spinach.....	½	2	0	2
Fennel.....	bunch	0	3	0	Tomatoes.....	½	2	0	4
Garlic and Shallots, lb.	0	3	0	0	Turnips.....	bunch	3	0	6
Herbs.....	bunch	0	3	0	Vegetable Marrows	do.	0	0	0

TRADE CATALOGUES RECEIVED.

William Barron, Elvaston Nurseries, Derby.—*Select Catalogue of Ornamental Plants*, 1864-5.

Smith & Simons, 34 and 35, Argyle Arcade, Glasgow.—*Catalogue of Gladioli*, &c.

James Veitch, Royal Exotic Nursery, King's Road, Chelsea, London.—*Descriptive Fruit Catalogue*, 1864-5.

TO CORRESPONDENTS.

•• We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

SIX CHOICE PLUMS (W. K. H.).—Green Gage, Reine Claude Violette, Coe's Golden Drop, Transparent Gage, Kirke's, and Reine Claude de Bavay.

VINE-BORDER (W. D. P.).—Under the circumstances your predecessor did quite right in making the drain, but it would have acted better if it had been 2 or 3 feet deeper, so as to have been below the depth of the border. We approve of all you propose, but if on chalk you think the firm bottom necessary, we would concrete it by mixing lime and gravel with the chalk, and then rolling it firm when wet, and on that we would place fully a foot of lamps beneath the soil.

LARGE CROPS OF PEACHES.—We are informed that the whole length of the wall, producing the crop mentioned at p. 349, is 183 feet, by 10 feet high. Of the eight trees, three occupy 63 feet and the remaining five 90 feet. The produce of the former, respectively, is thus shown:—No. 1 (23 feet width), 350 Peaches; 2 (20 feet width), 400; 3 (20 feet width), 400; other five trees (18 feet each), 1350.—In all, 2500 Peaches.

COATING FOR HOT-WATER PIPES (C. K.).—Before laying the pipes we coat them with black paint, composed of lampblack and boiled linseed oil sufficient to be of the consistency of thin paint. This is applied with a brush, working it in well so that every part of the iron may be covered, and it is allowed to become thoroughly dry before the pipes are fixed or jointed together. When the boiler is first set to work and the pipes as hot as they can be made, we give another coat with the same composition as thick as it can be put on, as it becomes much thinner when applied to the pipes. The oil paint applied on a hot surface finds the bottom of the uneven surface of the iron, and the heat being kept up until the paint is dry, it will last a long time without the iron rusting. We have it good at the end of ten years, and when it gives way we repaint the pipes as before whilst hot. Applying the paint to the pipes whilst hot creates an intolerable smell, and is not good for vegetation. The painting should therefore be done when the house is unoccupied with plants, and air being given the operator will be enabled to paint the pipes while hot, otherwise it is pernicious to breathe the atmosphere. If the pipes are not painted whilst hot, the paint is apt to peel off, but by heating the pipes are made thoroughly dry, and the paint runs to the very bottom of every hole and crevice; besides, though there is a strong smell it is gone all at once. This is our mode of painting pipes in cool dry houses—as stoves and greenhouses. We have another for pipes in moist houses, it is the best for any description of iron exposed to wet, and we only name the preceding, as it is a practice we followed successfully before we were aware of the latter, which is to coat the pipes whilst hot with genuine red lead paint. This is the best coating for ironwork of any description that we have tried, and we therefore recommend it in preference to black paint, or any paint that has nothing anti-corrosive in it except oil. Two years ago we removed about 400 feet of four-inch hot-water piping that had been down thirty years, and exteriorly they were as good as when put down, and this with a good coat of white lead paint. They had not been painted during that period. Whether white lead years ago was different from that which is now sold we cannot say, but it is certain that it will not at the present day preserve hot-water pipes from rust for half that period. Red lead paint, then, is what we recommend, and it should be put on whilst the pipes are hot, or they ought to be heated immediately afterwards and kept hot until dry. All plants being taken out of the house. Coating with gas tar is death to all vegetation if the pipes ever become hot, and the "blackening" of the foundryman is worse than useless, it is deceiving. For iron in or out of water, nothing is better for cheapness and efficiency than three good coats in the former case, and two in the latter.

VARIETATED HYDRANGEA CUTTINGS (M. F.).—The best time to strike these is after the shoots have grown from 4 to 6 inches long, and have become a little hardened. This, under ordinary treatment, is in June, when the points may be taken off with three joints and a growing point, cut transversely below the lowest joint, the leaves there and at the joint above removed, and the cuttings inserted in sand a little below the second joint. They will strike either in heat or in a shady part of the greenhouse. Cuttings of the young growing points taken now will root freely if the pots are plunged in a mild hotbed.

STOVE PLANTS WITH YELLOW FLOWERS.—EVERGREENS FOR SMOKY LOCALITIES (Constant Reader).—Allamanda cathartica, grandiflora, nerifolia, and Bobott; Impatiens Jordonii which has yellow in the flowers; Hibiscus lutea plena; Streptocarpus regina; and Hexacarpus lutea. The most suitable shrubs are Rhododendrons of sorts, Aucuba japonica, and Hollies. Of smaller shrubs the very pretty Persea japonica, Andromeda floribunda, Heaths, Kalmia, Ledum, and Berberis Darwini. Most annuals do well; and of biennials or plants treated as such, the Wallflower is pre-eminent for spring, and Canterbury Bells for early summer; and Sweet Williams are invaluable. To give you full information on all that relates to the management of smoky gardens, would take more space and time than we can at present devote to it; but we hope to treat of the subject fully in an early Number.

VINES NOT THRIVING (York).—We think there is something pernicious in the soil, and that the border is quite rich enough. The indifferent colouring of the berries would indicate that the border is a little too rich rather than that it is not sufficiently so; or the unthriving state may be caused through an insufficiency of air, and the vines carrying too heavy a crop. The reason of the soil being obnoxious to the roots is, that it is strong dark soil. It ought to have been sound light-coloured loam, the top spit of a pasture being best. To it were added one cartload of rotten manure to every four of soil; a cartload of brick and lime rubbish from an old building to every three of soil would have been better especially with dark strong soil. The crushed bones are good, and that was all we would have enriched the border with at the time of making, for the rotten manure could not retain its fertilising properties longer than a couple of years and then they are gone, and a close soap-like mass, in which vine-roots do not like to run, is left behind. We presume the border is drained with rough stones to the depth of a foot, and that there is a drain along the border, and having an outlet, to take away the superfluous water. This being the case, and you being satisfied that the border is not a close, wet, soapy mass, but free and open, we would cover the outside border now with a few inches of litter to protect any roots that may be near the surface, and in February or March we would spread over the inside border 3 inches of partially decomposed short manure, and any nutriment the latter contains will be washed down to the roots with the waterings. We would also place from 6 to 9 inches of littery manure on the outside border at the same time, and any enriching matter which it may contain will be washed down to the roots by the rains that occur between then and June, when the litter may be removed, but the covering on the inside must be allowed to remain. This, if the border is not rich enough will do much to give the berries size, thinning them well when smaller rather than larger than Peas being another essential to obtaining large berries. Taking a moderate rather than a large crop, will do much towards securing proper colouring if accompanied by free air daily, and a little at night when the berries are colouring. On the other hand, if the border is wet and close, and the roots running badly in consequence of its not being drained, we can only recommend you to take up the vines and make a fresh border, but you must draw your own conclusions as to that, as we can only form an opinion from the data furnished.

WIDENING VINE-BORDER (Moonshine).—You may add another yard to the Vine-border now. It will not injure but improve the succeeding crop. By all means place the Strawberries for forcing on the shelves in the cool vinery, especially if they are to be forced early. You may stack them outside if you do not want to force them much, but they will ripen their buds much better in the cold vinery.

AMARYLLIS LONGIFOLIA AND ROSA.—POTTING LARKS CALATHINUS RULES (Thorn).—Pot them forthwith in turfy loam and leaf mould in equal parts, with a free admixture of sand. If the soil is moist do not water, but place the two former in a cool greenhouse, and the last in a warm greenhouse or cool stove. When they begin to grow, which they will do towards spring, water sparingly at first, gradually increasing the quantity as growth progresses, giving plenty in summer, reducing the quantity in autumn, and giving but little in winter. Keep in a light airy situation. In labelling, for *Amaryllis longifolia* write *Crinum cespense*; and for *Amaryllis rosea*, *Crinum cespense rosea*. They are nearly if not quite hardy in some parts of the country. They will grow in sheltered situations with a little litter over them in winter.

BOOKS (Sandhurst).—There is a cover for each volume of "The Florist and Pomologist," and it may be procured at our office. No "Annals of Horticulture" has appeared since 1849. "The Gardeners' Year Book" is published annually at our office, and contains the information you seem to require. (*A Young Gardener*).—There is no difficulty in the way of any bookseller, who has a trustworthy London agent, obtaining "The Wild Flowers of Great Britain." The Numbers appear regularly on the 1st of each month, and may be had direct from our office free by post for thirteen penny postage stamps. McIntosh's "Book of the Garden" is an excellent work for a young gardener. It may be obtained through any bookseller. It is in two volumes, price \$1 11s. 6d. and \$2 12s. 6d.

GAS STOVE IN GREENHOUSE (Ryde).—If, as you describe, all the fumes arising from the burning of the gas are conveyed by a pipe into the outside air, the stove may be safely used.

PEARS (G. I. L.).—Six Pears for your walls, to ripen from October to March, may be *Bourré Die*, *Bourré Rance*, *Gien Moreau*, *Fasse Colmar*, *Ne Plus Mearie*, and *Winter Nalis*.

DISEASED GRAPES (W. M. C.).—They are "spotted" as gardeners describe ulceration of the berry. As the crop is very heavy, the disease is probably caused by the roots not being able to supply sap sufficient to maintain healthy growth. The berries were too bruised to enable us to identify the variety. The roots are probably outside and too cold.

PLANTING FLOWER GARDEN (Alpa).—We think your proposed planting will do very well, though it would have been easier done with small beds. The design is pretty, but the fine figures in the centre will be drowned by the large ones round them. We question whether one bed of an octagon shape would not have looked better.

HOLMS IN RHODODENDRON LEAVES (E. W.).—The leaves on the sheets enclosed are eaten or punctured through by the larvae of some insect, but what that has been we are unable to tell. Ants have nothing to do with the mischief. Had you looked at the *Rhododendron* foliage in July and August you would have found a dusky-looking caterpillar, about three-quarters of an inch in length, feeding on the then succulent leaves; and had it been picked off with the hand and destroyed, the mischief would, to a certain extent, have been mitigated.

BOXES COATED INSIDE WITH GAS TAR (A. H.).—If the tar was allowed to become thoroughly dry, or be absorbed by the wood before soil was put in the boxes, it will not injure the cuttings more than had the boxes been coated with ordinary lead paint. The roots, however, of all plants do not like tar, and we do not see why it was applied to the inside of the boxes. After the boxes have been used some time the tar will wear off; but if the plants will not grow in them satisfactorily you have no remedy but to take the boxes to pieces and have the tar planed off. We think this will be unnecessary, and that you are needlessly alarmed; for what we said of gas tar had no relation to such work as yours. It related to an entirely different subject; but yet no plant will grow well in a tarred tub or box.

ALOCASIA METALLICA AND LOWLY DRYING OFF—NEPENTHES DISTILLATORIA (A Sunderland Amateur).—The *Alocasias* should have less moisture, less heat, and no more water during winter than is necessary to keep the soil barely moist. The temperature named is quite low enough, a minimum of 60° being most suitable. The bottom heat is right, but the saucers of water ought to be dispensed with at this season. The soil should not be allowed to become dust dry, nor ought the foliage to be allowed to suffer for want of water. A rest is essential to free growth next season. They should not be dried like *Caladiums*, but still rested by diminishing the atmospheric moisture, heat, and the supply of water at the root. They will do under the conditions named in the refuse or tan, preference being given to the former. The *Nepenthes* also should have a rest, and it will do under the same conditions as the *Alocasias* at this season. In winter it should not have so much moisture, nor heat, as when growing.

NAMES OF FRUITS (G. Taylor).—1, *Bourré de Rance*; 2, *Forelle Pear*; 3, *Cellini*; 4, *Wormley Pippin*; 5, *Nonpareil*; 7, *Reinette du Canada*; 8, *Golden Winter Pearmain*; 10, *Cellini*.—2-1, *Autumn Bergamot*; 2-2, *Fasse Colmar*; 2-3, *Margil*; 2-4, *Trumpington*; 3-6, *Kerry Pippin*. (*E. B.*)—1, *Dumelow's Seedling*; 2, *Herefordshire Pearmain*; 5, *Winter Greening*; 6, *Autumn Pearmain*; 8, *Court of Wick*. (*Bushbridge*).—1, *Fondante de Malines*; 2, *Sans Pepins*; 3, *Duchesse d'Angoulême*. (*G. F. O.*)—1, *Esfolk Thorn Pear*; 2, *Bienheim Pippin*; 3, *Ribston Pippin*; 5, *Mank's Codlin*; 9, *Wyken Pippin*. (*H. P.*)—35, *Emperor Alexander*; 55, *Nonpareil*; 60, and 77, *Court of Wick*; 80, *Herefordshire Pearmain*. When numbers are not mentioned the specimens were not recognised.

(*W. B. B.*)—*Pears*.—1, *Bourré Die*; 2, *Bourré Rose*; 4, *Bourré Die*; 6, *Bourré de Rance*. (*Apples*).—1, *Hollandbury*; 2, *Dumelow's Seedling*; 3, *Scarlet Nonpareil*; 4, *Beauty of Kent*; 5 and 6, *Court Pendu-plat*. **NAMES OF PLANTS (M. D.)**.—*Salvia Grahmi*. (*Earw*).—1, *Corydalis lutea*; 2, *Too young to name*; 3, *Inula dysenterica*; 4, *Eupatorium cannabinum*; 5, *Nardus stricta*; 6, *Agrostis alba*; 7, *Spergularia rubra*. (*Orchidophilus*).—We see no reason why your plant should not be *Cattleya superba*, except that the flower is smaller than usual. (*Eskdale*).—1, *Seems to be a Tradescantia*, but the flower is completely smashed by the post-office stamper; 2, *Tritonia aurea*.

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

POULTRY SHOWS IN THE SOUTH.

I SHALL be glad if I can be spared a little space to say a few words on this subject. I know England, north and south, pretty well; I may add east and west too, nor am I

a stranger to things existing in the manufacturing districts of Lancashire, and my eye has always been upon poultry. First, in regard to shows, their uses and benefits. By placing prominently before the eyes of many persons beautiful specimens of the various breeds of fowls, it follows that at every show a desire arises in some of the lookers-on to possess such fowls as they behold. Also, in some who already keep good birds, there comes a wish to possess better. Hence each show increases the love of poultry. It is seed sown: therefore, shows should be encouraged by all who are lovers of, or who are interested in fowls. Again: shows are supported to a great extent by amateurs, more or less wealthy, who keep no account of expenditure, and, doubtless, sacrifice a considerable sum yearly, only being paid by the pleasure afforded; and who will say, that to such persons so situated, this is bad pay?

Next we come to a class of fanciers of special sorts of fowls, who having a name, in most cases well earned, make their hobby self-supporting, or even very remunerative. But poultry shows must for stability look to something else. To succeed permanently they must rest upon a broad commercial basis. Fancy alone will not do; whims even the most amiable seldom fill the pocket, though by the way, I am for hobbies without loss at any rate. In short, shows must pay, and they can only pay by introducing or encouraging those kinds of fowls which are profitable. Now, in the south, Dorkings are chiefly kept. Without doubt, the Dorking is the paying table fowl; its square build, its deep breast giving an extra cut, point it out as the very fowl for the cook. But fowls have another use—viz., they are producers of eggs, and hundreds of eggs are broken in our kitchens to every couple of fowls cooked. Now, in the south of England egg-producing fowls are not kept in sufficient numbers, hence French eggs, Jersey eggs, and Irish eggs, are imported in thousands, and who is to know when they were laid? By the way, I always date each egg with my pencil as I take it from the nest. It is such a comfort to see the date before you break the top at breakfast, feeling quite sure that all is right inside. Dorkings for farmers, and for others who supply the southern markets with table fowls. For them many prizes should be given at all southern shows. The egg question remains, and I am sure many may add to a living by the sale of eggs, who cannot breed fowls. I say, then, to our southern friends: your motto must be, "Hamburgs come south," and to bring them south offer many and good prizes. They, the Hamburgs, are our best egg-producers, and until the breed is made tolerably universal in England, there will be a deficiency in eggs. Fancy will do for other fowls, but Dorkings and Hamburgs do not rest on mere fancy. Surely the admirable qualities of the Hamburg cannot be known. At the Chippenham Show last year, not one pen of Silver-spangled was exhibited, and only two of Golden-pencilled and Silver-pencilled, and only one of Golden-spangled. Eggs are the want, and from Hamburgs alone can come the supply. Let them not, then, be regarded any longer as mere pretty fancy fowls. People who keep poultry for profit have something yet to learn. Dorkings for farmers; Cochins and Spanish for town yards; Hamburgs for eggs where a tolerable run is to be had.

In writing upon this subject I take care to keep quite clear of my own individual taste or fancy, and to take a broad view. Pet love blinds one eye at least. A fancier will naturally "write up" what he fancies. Lovers of Brahmas, those "wandering Cochins," or Cochins without one great benefit of Cochins—viz., being stayers at home, will write up Brahmas. All this is natural, but what we want is more eggs. I quite endorse the words of "A THOROUGHbred SPANISH," "unless we cultivate and encourage the breed of everlasting layers, we shall not be able to compete with the French in eggs." So, again, I say, "Hamburgs of all kinds to the south." They are profitable where profit is needed. Other classes for fancy, and fancy prices; but Dorkings and Hamburgs for profit. Their excellencies are opposite, but keep the two, then the table will be supplied both with chickens and eggs. Let these two kinds be especially encouraged in all poultry shows in the south, this will bring both before the eye, and encourage both breeds; and I feel sure, both breeds being profitable, they will, if kept in great numbers, in turn support the show. WILTSHIRE RECTOR.

POULTRY JUDGES.

I PERCEIVE by your Journal of the 18th ult., that the Poultry Club are dissatisfied with the Judges of the Show at Birmingham, and are about to memorialise the Committee, either to change the Judges or to add to them other Judges "who will have the confidence of the exhibitors."

What does this mean? I, as well as many others, were under the impression that the Committee at Birmingham had carried out a most onerous undertaking in a most satisfactory manner, and the number of the entries and the quality of the birds exhibited, are a proof of satisfaction on the part of a very large number of exhibitors. Query, can Judges be had who will please all the exhibitors?

I can give you an idea of what some amateurs expect of Poultry Committees. We have a Society in this city, and for the past four years we have had an annual Exhibition which has been remarkably successful, and the general details of schedule, pens, Judges, and other arrangements have been highly approved of by every one who has visited the shows; but we find our arrangements do not please some members of the Poultry Club, as we have received a letter from a Dublin gentleman stating that though he highly approved of the schedule, &c., yet he had lost all confidence in any "Irish Judges" that he ever met with, and, therefore, he suggested that we should place ourselves in the hands of the Poultry Club, adopt their rules, and get them to send us two Judges, adding that the Club would pay a portion of the expenses of the Judges, and that he would make a large entry, and, besides, would give £3 in money, or medal, for the best pair of fowls exhibited. You will understand that this disinterested offer was conditional on our placing ourselves in the hands of the Poultry Club. The Committee answered, that they had the most perfect confidence in the Irish Judges, but that in the present case they had already appointed their Judges; and as it so happened, both of them were Judges approved of by the Poultry Club.

This you would fancy ought to suit the gentleman in question; but no, the Judge appointed for poultry, though admittedly a first-rate Judge, was not the one he wanted, so he "hung fire," and as far as could be judged from his letter in reply, was inclined to back out of the matter. Some members of the Committee were of opinion that it ought to be explained to the gentleman in question, that the Society was composed of gentlemen who bred and exhibited birds not for profit or puffing, but to improve the breeds through the country, and for their own amusement; but the majority decided on making no reply, but they were unanimous in declining to relinquish the control of the Exhibition at the suggestion of an interested exhibitor, even though he was willing to pay for their doing so.

I am a fancier of Pigeons, and have read a very excellent work on them by Mr. Eaton. He says in it, that one of the ways to get prizes at a Show, is to "buy the birds from the Judges," and from the awards at some of the late Exhibitions (*vide* last Islington catalogue), I am inclined to agree with him; and as we have kept clear of any "jobbing" up to this time, we do not wish to commence now. The Judges appointed for the Show are both well known in London, Birmingham, and Glasgow, and in no instance have their awards been questioned.—A CORK "FANCIER."

SUNDERLAND ORNITHOLOGICAL SOCIETY'S FANCY PIGEON SHOW.

THE first annual Exhibition and competition of fancy Pigeons in connection with the above Society was held in the Central Hall, John Street, Sunderland, on the 1st, 2nd, and 3rd inst. Originally the Society was only intended for the immediate locality, but, encouraged by distant fanciers, the Committee determined to make it open to the United Kingdom. Since the discontinuance of the late Halifax Exhibition—an event deeply regretted by all true fanciers—there has not been a really first-class Pigeon Show, with the exception of that at Glasgow, now also given up; and it was therefore to supply this want that the present undertaking was inaugurated, more particularly as the town of Sunderland is of easy access to both English and Scotch

exhibitors. A fancier unconnected with the Society, anxious to lend a helping hand, undertook to offer a silver cup value £5, to be purchased by private subscription, and to be given as might be determined upon; and through the same channel John T. Lawrence, Esq., of Liverpool, munificently contributed no less than five similar cups to be offered for five different varieties. One of the Hon. Secs., G. R. Potts, Esq., gave a similar cup, which, with two more given by the Society, enabled the Committee to offer no less than nine silver cups, value £5 each, for competition, in addition to nine classes with prizes of £2 and £1 each, as well as a selling class. Acting on the suggestion of Mr. Lawrence, the entry fees were fixed low—namely 5s. each pen, except for the selling class, the result being that most of the very best birds in the kingdom were sent for competition, numbering upwards of 230 pens.

All the birds were ranged on a level, the Glasgow circular pens being used on the occasion. Some of the birds were scarcely through the moult, but we understand that next year the Exhibition will be held at a later date, so as to enable the whole of the various specimens to be in greater perfection of feather. Under the able management of the Hon. Secs., Messrs. G. R. Potts and J. R. Robinson, the arrangements were most complete and admirably carried out in every respect, their exertions being crowned with entire success; and we hope the Society will continue to receive the encouragement to which it is so eminently entitled.

In the class for the best pair of *Almond Tumblers* there was an entry of twelve pens. Mr. Peter Eden won the cup with a splendid pair, good in all points. Mr. Else secured second position with a pen excellent in feather, but not so perfect in head and beak.

In the class for *Carriers* the cup was also awarded to Mr. Eden for a remarkably good pair of Duns. Mr. Colley was second and highly commended with good Blacks. In Mr. Else's highly-commended pen (Black), the hen was out of condition.

For the best pair of *Pouters* eight pens were sent, the competition being extremely close. The cup was awarded to an extraordinary pair of Yellows, belonging to Mr. George Ure; the hen being unquestionably the best of the colour ever exhibited. Mr. Eden took second with very fine Blues, and Mr. Potts received very high commendation for a capital pen of the same colour, the cock being slightly out of order; while Mr. Ure's Reds, a splendid pair, were highly commended.

Mr. Lawrence's cup for *Barbs* brought some first-class birds of this variety, more particularly in cocks, perhaps four of the best ever seen together competing. The cup was awarded to Mr. H. Beldon for Yellows of most unusual merit; the second went to Blacks, the cock with the drawback of having yellow eyes.

The *Fantail* class was an excellent one, numbering fifteen pens. Mr. Else secured the cup (Mr. Lawrence's), with a plain-headed pair, small and fine, good in carriage and condition; a nice pair were second; and seven pens, including a good pair of Laced, received notice, proving the closeness of the competition.

In *Jacobins* ten pens were sent for Mr. Lawrence's cup, which was taken by a beautiful pair of Reds, very small and fine, an equal match, with good hood and chain, belonging to Mr. Esquilant; fine Blacks were second; while Reds (two pens), and Blacks were highly commended.

In *Turbits* fifteen pens were exhibited, Mr. Lawrence's cup being awarded to a splendid pair of shell-crowned Reds, clean and fine, belonging to Mr. S. Shaw; a small pair of peaked-crowned Blues were second; two pairs of good Yellows and a pair of Silvers receiving high commendation.

The *Owls* formed a beautiful class of a dozen entries, Mr. Lawrence's cup falling to Mr. Sanday's fine pair of Whites, shown in capital condition, with the exception of the hen being slightly picked on the head. Mr. Eden took second with very good Blues, a good match; and the Blue cocks in each of the pens shown by Messrs. Else and Fielding were highly commended, as well as a pair of Whites belonging to the latter.

In the class for *Trumpeters* fourteen pens competed. The cup, given by distant fanciers, was won by Mr. J. R. Robinson with a splendid pair of Black Mottles, good in rose

marking and size. Mr. Shaw was second with the same colours, his famed old Mottled cock not being so well accompanied as formerly. First-class Whites received very high commendation, and good Whites, Mottles, and Blacks were highly commended.

Blue Pouters formed a class of seven pens. Mr. G. Ure had first with an extraordinary pair in every point. Mr. Cochrane's second-prize birds were also very good. **Black Pouters** only numbered four entries, but each was worthy of a first prize, and such a class was never, we believe, brought together. Mr. Potts was first with birds of great length. Mr. Eden was second. Mr. Ure's highly-commended pen contained a particularly good cock. **White Pouters** were not numerous but good. Messrs. Eden and Ure divided the prizes in the order named. In any other colour of Pouters, Mr. Ure had first with a pair of Reds of extraordinary length; and Mr. Potts' second-prize pen contained one of the best Red hens known.

Black Carriers mustered eleven pens, but Mr. Eden out-distanced competition with remarkably good birds, and took both prizes. In the class for **Dun Carriers**, Mr. Colley took both prizes with capital representatives.

Balds or Beards formed a pretty class. Very fine Blue Beards were first, and Blue Balds second. The latter were unusually good in head and beak, and clean cut, but slightly deficient in matching, the hen being unequal in colour to the cock.

In the class for **Mottles or Kites**, Mr. Eden had both prizes with his wonderful Black Mottles, four pens receiving notice.

Any other Variety Class numbered fourteen entries. The first prize went to Mr. Shaw's Blue Shields, shown in fine condition. The Rev. C. Spencer was second with Swiss Pigeons. Isabells, Satinettes, and Brunswicks were highly commended.

The **Selling Class** brought no less than sixty-five entries. Black-headed Nuns were first; Helmets second; and Fantails third.

The following is the prize list:—

TUMBLERS (Almond).—First and Cup, P. Eden, Salford. Second, F. Elze, Westbourne Grove, Bayswater. Highly Commended, P. Eden; G. Ure, Dundee; F. Elze.

CARRIERS.—First and Cup, P. Eden, Salford. Second, T. Colley, Sheffield. Highly Commended, T. Colley; F. Elze. **COCK.**—Highly Commended, W. Massey, Godney.

POUTERS.—First, Cup, and Highly Commended, G. Ure, Dundee. Second, P. Eden, Salford. Very Highly Commended, G. R. Potts, Sunderland.

BARDS.—First and Cup, H. Beldon, Bingley. Second, W. B. Van Haansbergen, Newcastle. Highly Commended, P. Eden, Salford. **COCK.**—Highly Commended, W. H. C. Oates, Beethorpe, Notts.

FANTAILS.—First and Cup, F. Elze, Bayswater. Second, J. R. Jessop, Hull. Highly Commended, T. Ridpath, Rusholme; A. P. Leite, Manchester; J. Thackray, Petergate, York; H. Yardley, Birmingham; G. Ure, Dundee; F. Elze; R. T. Jarvis, Dartford.

JACOBINS.—First and Cup, F. Esquillant, Oxford Street, London. Second, T. Ridpath, Rusholme. Highly Commended, S. Shaw, Halifax; F. Elze, Bayswater; F. Esquillant.

TURBLES.—First and Cup, S. Shaw, Halifax. Second, J. R. Robinson, Sunderland. Highly Commended, S. Shaw; H. Yardley, Birmingham.

OWLS.—First and Cup, G. H. Sanday, Nottingham. Second, P. Eden, Salford. Highly Commended, P. Eden; J. Fielding, jun., Rochdale. **COCKS.**—Highly Commended, J. Fielding, jun., and F. Elze, Bayswater.

TRUMPETERS.—First and Cup, J. R. Robinson, Sunderland. Second, S. Shaw, Halifax. Very Highly Commended, F. Elze, Bayswater. Highly Commended, W. B. Van Haansbergen, Newcastle; W. H. C. Oates, Beethorpe, Notts; S. Shaw; F. Elze; J. R. Robinson.

POUTERS (Blue).—First, G. Ure, Dundee. Second, J. Cochrane, Glasgow. Highly Commended, H. Beldon, Bingley; H. Brown, Walkley, Sheffield. Commended, G. H. Ellis, Leicester; P. Eden, Salford.

POUTERS (Black).—First, G. R. Potts, Sunderland. Second, P. Eden, Salford. Highly Commended, G. Ure, Dundee. Commended, H. Beldon, Bingley.

POUTERS (White).—First, P. Eden, Salford. Second, G. Ure, Dundee. Highly Commended, P. Eden; R. Fulton, Deptford.

POUTERS (Red, or Any other colour).—First, G. Ure, Dundee (Red). Second, G. R. Potts, Sunderland.

CARRIERS (Black).—First and Second, P. Eden, Salford. Commended, H. Martin, Glasgow; A. P. Leite, Manchester.

CARRIERS (Dun or Any other colour).—First and Second, T. Colley, Sheffield. Highly Commended, F. Elze, Bayswater; F. Esquillant, Oxford Street, London.

TUMBLERS (Balds or Beards).—First, W. H. C. Oates, Beethorpe (Blue Beards). Second, F. Esquillant, Oxford Street, London. Highly Commended, J. Fielding, jun., Rochdale (Blue Beards); T. Ridpath, Rusholme.

TUMBLERS (Mottles or Kites).—First and Second, P. Eden, Salford (Black Mottles). Highly Commended, W. H. C. Oates, Beethorpe, Notts (Red Mottles); J. Percival (Kites). Commended, J. Fielding, jun., Rochdale (Black Mottles); F. Elze, Bayswater.

ANY VARIETY NOT PREVIOUSLY NAMED.—First, S. Shaw, Halifax (Blue Shields). Second, C. Spencer, Attleborough (Swiss Pigeons). Highly Commended, Rt. Hon. Countess of Derby, Prescott (Isabells); H. Yardley, Birmingham (Satinettes); H. Beldon, Bingley (Brunswicks).

SELLING CLASS (Any variety).—First, W. Johnstone, Carlisle (Nuns). Second, H. Yardley, Birmingham (Helmets). Third, T. Hale, Durham (Fantails). Highly Commended, T. C. Taylor, Middlesbrough (Nuns); J. Bell, Newcastle (Tumblers); H. Yardley (Tumblers); J. R. Robinson, Sunderland (Carriers). Commended, J. W. Edge, Birmingham (Turbit); J. Key, Beverley (Turbit); J. Pringle, Newcastle (Balds); W. Massey, Godney (Dragons); J. Bell (Tumblers); H. Yardley (White Trumpeters and Yellow Magpies).

The Judges were Mr. T. J. Charlton, of Bradford, and Mr. D. Wolstenholme, of London, and their decisions gave general satisfaction.

LIGURIAN BEES DETERIORATING INTO BLACK BEES.

THERE is a long review of the *Times*' "Bee master's" book in the *Morning Star* of the 25th of October, which, no doubt, you and many of your readers will have seen; but we shall feel much obliged to Mr. Woodbury if he would say if it is a fact that the pure Ligurian bee changes into the common black bee in course of time, as the reviewer states. But I have no doubt that many of your apiarists would be much obliged to Mr. Woodbury if he would review this book, and also the *Star's* reviewer in your Journal.—A. W.

[The *Star* reviewer is quite wrong in stating that "pure Ligurians change in the course of generations into the common British variety," if he meant that this change can be effected in any other manner than by interbreeding with the black species. I am, in fact, pretty certain that this latter is what he really did mean, although he was rather ambiguous in his mode of expressing it. There is no doubt whatever that the tendency to cross between the two varieties is the great difficulty to be encountered in introducing the Ligurian to a country so well stocked as England is with the common black bee. Still I know cases, and could point to one in particular, where a Ligurian stock was introduced into an apiary of common bees some years ago, and permitted to increase by natural swarming only. The result has been, as was to be expected, a considerable number of hybrids; but even now some stocks continue to present all the characteristics of pure Ligurians.

I regret that I cannot comply with "A. W.'s" request by reviewing either the book or the *Star* reviewer, since I agree with nearly all the conclusions at which the latter has arrived, whilst I feel precluded from noticing the so-called "bee-book" itself by the fact that a great part of it consists of mere personal vituperation directed against—A DEVONSHIRE BEE-KEEPER.]

BEES ARE NOT CARNIVOROUS.

BELIEFS however mistaken, and statements however absurd when honestly made are entitled to respect, and should not be cast overboard without investigation, as the groundless superstitions of some Jonas Jackson. When "RUBY" gravely informed us that bees, like flies, fed on flesh and fowl, or possibly garbage and carrion, I would have looked upon him as gravely facetious, had not the Editors of the *Journal* assured us that the alleged fact was supported by most respectable testimony.

Besides, the Ligurians bore a striking resemblance to wasps in their outward appearance, and why might they not also resemble them in their habits? But, unhappily for antiquated notions, neither black bees nor Ligurians, so far as I can perceive, are disposed in the very least degree to be carnivorous.

About three weeks ago I presented two hives with pieces of roast beef, pheasant, and thrush. Some pieces were simply roasted, others were basted with honey, or immersed in syrup of sugar. Those saturated with honey and sugar were the only pieces that the bees cared about, the others were quite unheeded; although a process of disintegration went on in the pieces made attractive by honey and sugar, not one particle was eaten. What was wanting in the original size of the pieces was found under the drainer on the bottom of the feeding-trough, in granules reduced to about the size and form of eggs laid by the queen bee. Had I not taken the precaution of using a trough protected by a bar-drainer, the particles would doubtless have been thrown down on the floor-board, or carried out. As soon as the

honey and syrup were extracted the pieces were abandoned, and they have been lying within the hives from the time I inserted them till now, as uncared for as a cast-out maggot.

Bees, under certain conditions, when gnawing flesh with a view to its removal, may make use of the juice; but I am persuaded no amount of fish, flesh, or fowl, would preserve the lives of a famished hive a single day. It is the saccharine matter on which bee-keepers must depend for the safety and prosperity of their bees. Next to honey, the best food and most easily procured for feeding purposes, is lump sugar melted in the manner recommended by Mr. Woodbury, the proportions being 8 lbs. of sugar to 2 lbs. of water.—R. S.

JOINING LIGURIAN BEES TO ENGLISH OR BLACK BEES.

In the Journal of October 11th, "A. W." says he joins stocks of bees by fumigation. Now, it is decided by bee-masters that fumigation by whatever process it is accomplished, more or less injures the bees. The great secret of joining bees or uniting stocks is, after having removed one of the queens, to liberally sprinkle each lot to be joined with sugar and water. The bees immediately commence lapping it up. The stock to be joined should then be well sprinkled and shaken down in a mass upon the top of the bars. The bees of each lot commence cleaning one another, and the assistance rendered makes them friends and proves the old saying, "A friend in need is a friend indeed." If the bees joined are from the same apiary, it is well to confine them in the hive until the next night, when very few bees will go back to their old place.

I have this last month joined twelve stocks of common bees to my Ligurians, and in some cases have joined the Ligurian bees to a black stock; but I of course destroyed the black queen in every case. I have not lost on an average more than a dozen bees in each stock joined, and have not had a single failure. It is all nonsense about peppermint scent and all other nostrums.—WILLIAM CARE.

[You appear to have been very fortunate in uniting bees this autumn. Following precisely the same course, you may be equally unfortunate next year, as no means have yet been discovered by which we can be absolutely certain of avoiding a quarrel. Be not too hasty in condemning the use of peppermint-scented syrup. We believe it to be serviceable in confounding the sense of smell by which bees are supposed by many to recognise each other. No harm, at any rate, can result from its use.]

BEE-HIVE PROTECTORS.

I HAVE been a bee-keeper for several years, and during that time have tried various contrivances for protecting my hives from the weather. Bee-houses I have discarded on account of the large number of bees which I generally lost during the autumn from spiders' webs. Some mornings I have found as many as a dozen bees entangled in the meshes of the spiders' webs, if I omitted to clear the houses early in the morning before the bees ventured out. Large straw hives I have also used for coverings, but they also want something to cover them, or during very wet weather the rain is apt to soak through and cause dampness in the hive which they are intended to protect. Some bee-keepers recommend covering the hives with earthenware dishes similar to milk-pans. I have also used these, but have found it necessary to have stakes fastened in the ground to secure the covers to, or off they would have come the first windy day. The stakes and the string which are required to keep this description of cover on the hives make it look a very untidy affair. Well, after having tried almost everything that I could think of, I came to the conclusion that something in the shape of a large hive would answer the object I had in view, and could be made to look ornamental; but as I work my bees on the depriving system, I was at a loss how to contrive a cover which would keep my bees free from damp in the winter, and without removing it enable me to work them in summer. After some little reflection I determined to have a large clay pot made in the shape of a bee-hive, but with the top moveable like the top of a sea-kale pot. Having some business to transact with

the manager of the Southborough brick field at Kingston, I explained to him what I required, he readily understood me, and made some pots with moveable tops sufficiently large to enable me to put a cap on in summer, and then make use of the top of the cover to protect the cap from getting wet. At the present time I am, of course, using them to cover the stocks only, and to my mind they are an ornament to the garden, but I think that they will be much more so in the summer, when I am using the small straw caps, and the cap covered with the clay top. I have shown the covers to many friends who are interested in bees, and they all pronounce them to be good, and I think that if they were generally used we should not hear of so many hives being annually lost through damp. I intend painting the covers with stone-coloured paint, at present they are as I received them from the potteries.—J. W. T., Wandsworth, Surrey.

THE "TIMES" BEE-MASTER'S BLUNDERS.

A good deal of Dr. Cumming's nonsense about bees is tolerably harmless; and had it not most unfortunately appeared under the authority of the *Times* newspaper, would no doubt have been passed over with the silent contempt which no real bee-keeper could help feeling on reading the letters. In your notice of his lecture at Liverpool you quote him as saying, "Swarms always take place between twelve and three o'clock," and you pass over this most mischievous misstatement without correction. Every one who really keeps bees must know that if he never began to watch before twelve o'clock most of his swarms would be lost, and I cannot imagine a piece of information more likely to ruin the hopes of a beginner. I may as well add that bees on fine days, at swarming time, may be expected to come off at any time from 9 A.M., and even earlier, up to 3 and even 4 P.M.—FRANK GRANT.

FOUL BROOD.

On reperusing my notice of foul brood in pages 343 and 344 I fear I have not been sufficiently explicit in disclaiming all participation in the absurd notion that this disease is due to the mode in which the queens of infected stocks deposit their eggs. If this were really so, no mode of treatment would avail in mitigating the disease so long as the faulty queen was retained. I need hardly say that so far from such being the case, a change of queens is not even of the slightest service. My object was merely to draw attention to the fact that in more than one instance diseased brood has been found to be inverted, and to inquire how far this circumstance had come to the knowledge of other observers.—A DEVONSHIRE BEE-KEEPER.

DEADLY EFFECTS OF THE YEW TREE.—It appears from recent facts which have come under our notice that the Yew when taken into the animal stomach becomes fatal in its poisonous effects, which proved to be the case a few days since. Some men employed by the Llanelli and Swansea Extension Railway Company had occasion to fell a Yew tree that stood in the way of some cuttings on land in the occupation of Mr. John Morgan, Bolgoed, where some cattle belonging to that gentleman happened to be grazing on a field into which the tree fell, when unfortunately one of his best cows, in full profit, browsed some of the Yew leaves, which in a few hours proved fatal. A post mortem examination was made, and proved that among the contents of the stomach was a quantity of Yew in a high state of fermentation. Only a few days since we heard of a similar occurrence to a horse belonging to Mr. J. Bailey, of Littleton Drew.

TO PREVENT CATTLE FROM JUMPING.—At the last meeting of the Am. Inst. Farmers' Club, the following novel way of preventing cattle from jumping fences was promulgated. Its parentage is good:—"We lately learned a curious remedy to prevent steers from jumping fences, which is so easy of application, and appears so effectual that we give it to the public. It is simply to clip off the eyelashes of the upper lids with a pair of scissors, and the ability or disposition to jump is as effectually destroyed as Samson's power

was by the loss of his locks. The animal will not attempt a fence until the eyelashes have grown again. Of this we are informed by Samuel Thorne, the great breeder of Duchess County, who assured us that he had tested it upon a pair of very brachy oxen. As it was of great value to him he hopes it will be tried by others."—(Canada Farmer.)

RAISING THE CALF—A HINT TO THE CRUSTY.

"Isn't she a beauty, father? Only see what a handsome little head she's got, and how fat she is. I don't believe there's another calf in the town that can beat her."

"That's just what I think, Nathan," replied the farmer, without raising his eyes from his axe-grinding. "She'll do to kill by Saturday. Joel Smith wants part of her. We might as well sell the whole, for the head and pluck will be as much as we shall want this hot weather."

"Don't have her killed, father. Why can't we raise a calf as well as other people? Ford said when he was getting the hay yesterday that it was a shame to have all of old Brindle's calves killed, for she was the best breed of cows anywhere about. You know what a pailful of milk she gave all last summer, and that you got the premium on her butter."

"Well, I know all that, boy, but she would cost more than a hundred dollars before she would bring a cent. If anybody is fool enough to raise them when they can buy them all ready for milk at 20 dols., to 30 dols., let them do it. I'm too old for such calculations."

"Perhaps it is so, but I can't bear to have her killed. If you will let her live I will take all the care of her, and raise a bed of carrots for her to eat next winter. Why, she shan't trouble you."

"Your mother wants the milk right away, to make all the butter she can this month, and if we keep the calf she must have it two or three weeks longer. Then, what will you do with her this summer?"

"Oh, let her go in the pasture with the cows. She can eat a little clover now; I fed her with some yesterday. Ford said she would eat almost anything in a little while."

"It would make pretty work to have her run with her mother; she'd take all her milk each day."

Here Nathan was at a loss for another plea, when he happened to think of the little orchard, and proposed to put her in there. But his father told him she would eat the sour apples that fell off and spoil her teeth. He thought he could put Bossy in her pen at night, and get up early enough in the morning to pick up the apples. Several other objections were raised and met with the same boy-earnestness, when his father told him to go to his work and he would see about it. This "see about it" gave the boy some encouragement. He thought it would be a good plan to get his mother on his side. When he went into the house he found her so busy in soap-making that all he could get from her was, "Just as your father thinks best about it; I shall want the rennet, for I am going to make cheese in dog-days. The butter isn't worth much that's made then." Here was something new for Nathan, who did not know what rennet was for, or where it came from. When his mother told him it was the calf's stomach, he thought it would be an easy matter to get one of some of the neighbours who never made cheese. A few mornings after this conversation, farmer Gaines asked his wife what she thought of letting Nathan raise the calf. Her reply was, "You know best about it, father. I should like to have the boy gratified, if it don't give you too much trouble." What an excellent lesson this reply was to all dictatorial, unthinking wives, whose opinion must rule, or there will be a drizzle or storm within and without.

Nathan heard and said nothing about Bossy for a week, expecting every day that she would have her throat cut, loving her all the more with the fear of losing her. In the meantime the farmer had been resolving the subject in his mind, and came to the conclusion that if keeping the calf would make an early riser of his boy it would be worth while to try it, for the summer at least, when he thought he would get enough of taking care of her, and be glad to have her sold in the fall to the drovers. No farmer could have been more pleased with a present of the best Devon or Ayrshire cow, or seen from her a better prospect of wealth, than did Nathan Gaines when his father told him he might keep the

calf, if he would take good care of her, and raise all the roots she wanted for next winter. All this he promised to do, and anything else that was desired. Never had he so high an opinion of his father before. This unexpected favour made obedience a very easy matter. Every morning Nathan was up bright and early to take care of his calf and look after his carrot-bed, so as to be ready for any other work. Bossy soon became so much of a pet with the family that she never went hungry. Even the farmer, who feared so much the cost of raising her, seemed to enjoy giving her an extra bite as he went to feed his horses, and often Nathan found bits of bread and other morsels from the table, which she liked very much. When autumn came the calf had done so well there was no danger of her being sold. Every one who saw her said she was the largest and best one of the season. Farmer Gaines thought his boy had done enough more work to pay for all she ate, and if it took a ton of hay to keep her through the winter, he had no idea of having her sold. Nathan's interest in the calf never flagged, neither did he allow her to be any trouble to his father. We will pass over three years of her life, when we find young Brindle giving as much milk as her mother, and will soon take her place in the barn, for old Brindle's cow-life is almost over, and she will in a year or two be consigned to the beef-barrel.

Farmer Gaines has never regretted that the calf's life was spared, for he has a better cow than he could find elsewhere; and by gratifying Nathan in this act the boy had formed habits of carefulness and industry which will be worth a fortune to him. No father loses anything by giving the boys reasonable indulgence, even if the cost is not always repaid in cash.—(Ohio Farmer.)

OUR LETTER BOX.

SILVER-PENCILLED HAMBURG COCK'S TAIL (R. W.).—It should be white with a black tip to each feather. A black tail would be a disqualification. Any approach to it is therefore a defect.

WASHING FOWLS (Fancier).—As a rule it is only the outer feather that is dirty, therefore it is only that which requires washing. Wash with soap and water, then put the bird in a basket partly filled with hay or soft straw, and let it stand before a fire till dry.

DR. CUMMING AND VIRGIL.—I noticed in your Journal of last week that "A CONSTANT READER" had called your attention to Dr. Cumming's saying in his lecture on bees that "Virgil has given an account of bees in one of his Eclogues," which should be "Georgics." In justice to Dr. Cumming, I beg to say that the mistake was my own, in inadvertently transcribing Eclogues, instead of Georgics, in the report, for which I beg to apologise.—E. A. ROW CLIFF.

TOMATO SAUCE.—Break the tomatoes into an earthen pan or jar, bruise, and sprinkle with a handful of salt, and let them stand twenty-four hours; then stir them up, and put them into an oven closely covered, and let them simmer very gently for about two hours; then work them through a sieve till the seeds are left quite dry. Add some spice according to taste, and a root of garlic chopped fine, and a teaspoonful of dry sweet herbs to every quart of tomato. Put into the oven again, and let the whole simmer till it attains the thickness required. The spice stated in the recipe is a quarter of an ounce of cloves, a quarter of an ounce of mace, half an ounce of allspice, and one ounce of ginger, cut in slices, to each quart of tomato. If you prefer it you can substitute Cayenne pepper for ginger.

Tomato Sauce to keep through the winter.—Put a peck of tomatoes, six large onions, one or two capsaicums, and six shallots, into an earthen crock, and place it in an oven, when the bread is taken out; leave them until quite soft; then, when cold, pass them through a fine hair sieve. Add pepper and salt, and boil the *purée* until sufficiently thick, about the thickness of very thick cream. When cool, bottle for use in wide-mouthed bottles, covering the corks with sealing-wax or resin. If at any time it appears to ferment boil it again, adding a little more pepper and salt.

"A GARDENER'S WIFE" can recommend the following recipe for making tomato sauce, to which horseradish can be added if the recipe is liked:—When quite ripe take off the stalks and wipe the fruit quite dry, put into a slow oven or stew-pan till soft, then put through a hair sieve to separate seeds from pulp. To every pound of pulp add one pint of gooseberry vinegar, twenty large shallots, half an ounce of garlic, half an ounce of capsaicum, half an ounce of ground white pepper, and 3 ounces of salt. Boil the whole until the shallots and garlic are soft, rub through the sieve again, and give another boil. If too thick, add more vinegar; bottle when cold. If gooseberry vinegar cannot be had common will do.

LONDON MARKETS.—NOVEMBER 7.

POULTRY.

There is a good average supply of poultry, and a very bad demand; prices are consequently low. Partridges, as usual, are becoming scarce, but the supply of Pheasants is large.

	s.	d.	s.	d.		s.	d.	s.	d.
Large Fowls	2	6	to	3	Grouse	2	0	to	3
Smaller do.	2	0	to	2	Partridges	1	9	to	2
Chickens	1	6	to	1	Hares	2	0	to	2
Geese	6	0	to	6	Pigeons	0	8	to	0
Ducks	2	0	to	2	Rabbits	1	4	to	1
Pheasants	2	0	to	2	Wild do.	0	8	to	0

WEEKLY CALENDAR.

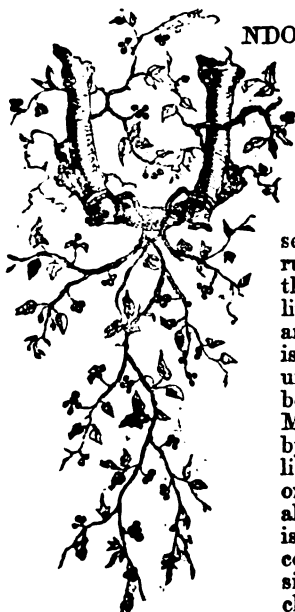
Day of Month.	Day of Week.	NOVEMBER 15—21, 1864.	Average Temperature near London.			Rain in last 37 years.	Sun Rises.		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock after Sun.	Day of Year.
			Day.	Night.	Mean.		m.	h.	m.	h.	m.	h.	m.	h.			
15	Tu	Apricot leafless.	48.4	34.4	41.4	16	21	af 7	9	af 4	53	5	58	8	16	15 10	320
16	W	Larch leaves fall.	48.5	32.7	40.0	18	28	7	7	4	49	6	52	9	17	14 59	321
17	Th	Teal arrives.	47.8	33.8	40.8	17	24	7	6	4	50	7	38	10	18	14 47	322
18	F	Fieldfare arrives.	47.6	33.3	40.4	19	26	7	5	4	54	8	15	11	19	14 34	323
19	S	Pyracantha berries turn orange.	48.3	32.7	41.0	16	28	7	4	4	59	9	45	11	20	14 20	324
20	Sun	26 SUNDAY AFTER TRINITY.	48.5	35.0	41.7	13	29	7	2	4	2	11	after.		21	14 6	325
21	M	CROWN PRINCESS OF PRUSSIA BORN, 1840.	49.2	36.4	42.8	22	31	7	1	4	morn.	35	0		22	18 50	326

From observations taken near London during the last thirty-seven years, the average day temperature of the week is 48.3°, and its night temperature 34.2°. The greatest heat was 62° on the 16th, 1840; and the lowest cold, 16°, on the 15th, 1848. The greatest fall of rain was 0.87 inch.

DECORATION OF THE FLOWER GARDEN IN WINTER AND SPRING.

(Concluded from page 369.)

SED.—YELLOW-FLOWERING PLANTS.



UNDOUBTEDLY the handsomest of yellow spring flowers is *Alyssum saxatile*. It is now in bloom with me on rock-work, and it, with *Aubrietia deltoidea* and *Arabis alpina*, promise to bloom abundantly throughout the winter. Being in patches of several superficial feet, and running over large stones, these have the appearance of little mountains of blue, white, and yellow. *Alyssum saxatile* is a free-blooming evergreen undershrub, forming gorgeous beds of yellow in April and May. It is readily propagated by cuttings taken off with a little of the old stem, or a heel, or slipped like Sage. It is also raised from seed. There is a variety called *A. saxatile compactum* which is very desirable on account of its dwarf close habit and profuse blooming. The variegated form (*A.*

saxatile variegata), forms a lovely golden mass in early spring, its foliage being also very ornamental. All the above thrive in well-drained soils of any description, but best in sandy loam.

Alyssum montanum is a dwarfer free-blooming yellow than *A. saxatile*, being only half the height of that species. It is increased by division. Under the name of *A. alpestre* two distinct kinds are sold—at least, I had one *A. alpestre* that had flowers more curious than ornamental, appearing in June, and under the same name another, which was a lovely mass of golden yellow in April and May. It was also much more dwarf and compact. The latter is, I think, the same as that sold by nurserymen under the name of *A. alpestre*, and it is, I believe, the *A. Marshallianum* (Andrews), or *A. alpestre* of Bieberstein, which is from the Caucasus, whilst the other is to be referred to *A. alpestre* of Linnæus, it being from the mountains of Southern Europe. However this may be, the *Alyssum alpestre* that I wish to note for spring decoration does not exceed 6 inches in height, differs little from *A. montanum*, flowers most profusely in April and May, and is increased by division.

Alyssum orientale differs little from *A. saxatile* if both are not identical; the variegated form of it is, I am sure, not different from *A. saxatile variegatum*. They are pro-

pagated by cuttings, like sandy soil, and are very handsome in a mass.

Primroses. The most handsome of spring yellow-flowering plants is the Primrose, than which nothing makes a lovelier bed, and if it be edged with the Aucuba-leaved Daisy, nothing can be finer. The double form (*Primula vulgaris plena-sulphurea*), is unquestionably a diamond of the first water. It makes fine beds if edged with *Stachys lanata* alone, or with the latter planted alternately with the Aucuba-leaved Daisy.

Adonis vernalis. A mass of this old herbaceous plant is gorgeous in April and May. It grows about a foot high, and thrives in all well-drained soils, doing best in sandy loam or sandy peat. It is increased by division. There is another pretty kind (*A. vogensis*), little different from the preceding.

Onosma tauricum, than which few plants have brighter yellow flowers, is fine even as a specimen, but much handsomer in a mass. It grows from 6 to 9 inches high, flourishes in light soil, and is increased by division. It is, however, somewhat difficult of propagation, but at Well Head, Halifax, Mr. Baynes propagates it by layers, and it may there be seen in a pot looking as handsome as anything well can be. *O. arenarium* is a rather taller species, and equally handsome.

Double Marsh Marigold. For wet soils we have the Double Marsh Marigold (*Caltha palustris plena*), which is a gorgeous mass of gold, the flowers individually like buttons, and it grows with its roots in soil under water. It should be grown in wet soil, and is increased by division.

Cheiranthus alpinus is a dwarf yellow-flowering Wallflower, not more than 6 or 9 inches high, a perennial undershrub, increased by cuttings taken off with a heel, and inserted in July in sandy soil in a shady border.

Yellow Wallflower. The yellow variety of the common Wallflower (*Cheiranthus Cheiri luteus*), is very fine, and may be increased by inserting cuttings or slips with a heel in sandy soil in a shady border, keeping moist till well rooted. Plants may also be raised from seed, which should be sown in May in an open situation, transplanting the seedlings when large enough into nursery-beds in lines 6 inches apart, and the plants 3 inches apart in the rows. Under this treatment, with a rather light soil and copious waterings in dry weather after pricking out, they make fine plants by autumn, when they may be removed with balls to the places assigned to them, or transplanting may be deferred until spring. This, however, is best done in autumn, as the plants bloom much stronger; but a reserve should be provided to fill up any gaps that may occur.

Cheiranthus Marshalli, a splendid variety, is the next best yellow bedder to *Alyssum saxatile* and *Adonis vernalis*. The flowers are a good yellow, but to make sure of the stock being true it is best propagated from cuttings; for seedlings sport much, as do those of the common Wallflower, though it occasionally comes pretty true from seed. It makes a fine bed, and is fragrant withal. Propagated by cuttings or seeds the same as the common Wallflower.

Saxifraga cymbalaria, or Ivy-leaved Saxifrage, forms dense erect tufts from 3 to 6 inches high, with succulent ivy-shaped shining leaves, surmounted by a profusion of pale yellow blossoms, spotted with orange at the base. It prefers moist situations, but will grow anywhere, seeds most freely, reproducing itself in great abundance, and is evidently an annual. Seeds sown in June make splendid plants for blooming in the following year. For the ledges and fissures of rockwork this is a gay plant during the early spring and summer months.

S. aretioides is a yellow-flowering Swiss pigmy, of no mean appearance in a bed, but is better suited for rockwork. It is increased by division.

Anthyllis vulneraria is pretty enough for a bed, but flowers rather late, still it is worthy of a place. It is only the common Houndwort, however, common enough in chalky pastures, and therefore many people will not care to have it. It is increased by sowing the seeds when ripe, and by division when there is anything to divide.

Hippocrepis comosa, another English weed, and a very pretty one, not exceeding 6 inches in height, makes a neat bed. It is an evergreen trailer, and increased by division.

Uvularia perfoliata, and *U. flava*, are nice dwarf plants, increased by suckers taken off with a little root. They flower finely in May.

Narthecium ossifragum is another plant for wet soils. It would, however, be all the better if it bloomed a little earlier. It is a curious little thing, occasionally blooming well early in the season. It is increased by division.

Eremurus spectabilis, which I have not seen for a long time, strikes me at the moment as being likely to form a fine yellow bed to flower in May; it is increased by offsets.

Gagea lutea, a pretty little bulbous plant, a native of our woods, *G. stellaris*, a Scandinavian, and *Sternbergii*, a Swiss, make pretty beds in well-drained soils.

Trollius americanus. This really gorgeous species which is less than the magnificent *T. europæus*, must not be omitted. Both will grow anywhere, and are of easy management. Division.

Ranunculus illyricus, and *R. pygmaeus* (often confounded with *R. montanus*, which is taller, and does not flower so early) make splendid beds; but none rival *R. gramineus*, which is one of the many fine things to be found in Wales, the double form (*R. gramineus flore pleno*) being the best of all. Division.

Doronicum austriacum, and *D. scorpioides*, are nice plants, growing about 1 foot high. *D. plantagineum*, and *D. pardalianches*, are about double the height of the two preceding, the latter being the well-known Leopard's Bane, so plentifully found in many meadows. Division.

Gratiola aurea is a very pretty dwarf plant, not exceeding 6 inches in height, and it will grow anywhere. Division.

Last in my list of yellow-flowering plants are *Primula auricula lutea*, which is excellent for a yellow bed; *P. elatior*, *P. Pallasi*, a dwarf species, and *P. Palinuri*, an excellent small kind from Naples, rather tender, but doing well in sheltered situations in sandy loam.

4TH.—PURPLE-FLOWERING PLANTS.

Aster alpinus is a free-flowering purple, but somewhat late, and it is not always to be depended on. It grows about 9 inches high. Division.

Lamium orvala is a deep purple, the plant somewhat tall, and it flowers rather late. Division.

Myosotis purpurea, like the last, is another tall plant, having a very handsome flower much in the way of Chicory. Division.

Orobis vernus is a plant worthy of being planted in a mass. It grows well in any ordinary garden soil, attains a height of about a foot, and should be increased by parting the roots.

Ramonda pyrenaica, a dwarf plant, from 3 to 6 inches high, flowering in May, is a good purple, thriving well in sandy soil.

Tussilago alpina, about 6 inches high, is a pretty light purple, increased by division.

Hyoscyamus orientalis has purple flowers, with a tinge of yellow, grows a foot or 18 inches high, and prefers light soil. Division.

H. physaloides is a dwarfer and hardier species, a better purple, and flowers more profusely. Division.

Primula carniolica is a pleasing purple, and not more than 3 or 4 inches high. *P. viscosa*, *villosa*, and *nivalis* are pretty, and worth more attention than is at present accorded them. *P. purpurea*, a species from the Himalayas, is, I think, likely to prove the finest purple Primrose yet introduced. When we have added *Soldanella alpina* and *montana*, *Aubrietia deltoidea* and *purpurea*, which are blue rather than purple, we have no more purple flowers for spring, except *Viola odorata purpurea*.

5TH.—BEDS, INCLUDING REDDISH PURPLES.

The lack of blues and purples is fully compensated for by the richness of the flowers of this division; they are not, however, so bright in colour as desirable, nor so profuse in blooming as the whites and yellows.

The Hepaticas, double and single red, are amongst the foremost of spring flowers; in fact, Hepaticas form a charming class by themselves, and being amongst the earliest of spring flowers they deserve even more attention than is accorded them. *Hepatica triloba rubra* (single red), and *H. triloba rubra plena* should be associated with Snowdrops and Crocuses, as they flower earlier than the majority of spring-flowering plants.

Saxifraga oppositifolia is a charming plant, making one of the loveliest of beds. It should be raised as described for *S. oppositifolia alba*. *S. crassifolia*, and *S. cordifolia*, are also desirable. They are increased by division.

Lychnis alpina, from the Scotch hills, *L. viscaria*, and the double form of the last, are charming plants that must be hunted out of their native wilds, and planted in our gardens. Light soil is preferable for them. Division.

Hutchinsia stylosa is a somewhat tender plant, dwarf and very pretty. It is increased by division.

Erinus hispanicus, a pretty dwarf plant, is very fine, and of free growth, though it does not exceed 6 inches high, and is increased by division.

Epimedium alpinum is a creeper, growing some 9 inches high, and having blood red flowers in April. It is a native of this country. Increased by rooted cuttings, and will grow anywhere, but best in wet soils.

Phlox pilosa, *amœna*, and *verna*, are pretty flowers, flourishing in light loams, and growing about 6 inches high. All make nice bedders, and are increased by division.

Linnaea borealis, than which few plants are prettier, likes dry ground, and is an evergreen trailer, increased by division. It is a native of Scotland, and does not grow more than 3 or 4 inches high.

Arabis rosea is a glorious plant for filling a bed with fine rosy flowers in spring. It is as hardy as any *Arabis*, and is readily increased by division and seed.

Cortusa Matthioli is one of the many lovely plants of the order Primulaceæ. It grows 6 inches high, produces fine rosy red flowers, and is increased by division.

Ajuga reptans rubra, a dwarf plant, 6 inches high, is suitable for wet soils, but will grow anywhere. It has pretty flowers in May, and like most hardy plants is increased by division.

Canadian Columbine (*Aquilegia canadensis*), is a nice plant, with a pretty reddish orange flower. It may be raised from seed or propagated by division. It prefers sandy soils, doing best in sandy peat.

And why not have a bed of Geraniums in spring by planting *Erodium alpinum*, which does well in all sandy soils? It is dwarf, has handsome foliage, and is propagated by cuttings and division; also, a bed each of *Geranium nepalense* and *G. tuberosum*, which bloom in May in warm situations, and are then amongst the handsomest of pink flowers. Sandy loam is the best soil, and a stock may be obtained from cuttings or by division of the roots, which is a slow but sure process.

Silene acaulis, a little plant common on some hills in Scotland, makes a neat mass, but is at least a month too late in blooming, though it does sometimes come early. It is propagated by division.

Pulmonaria grandiflora, a fine pink, and *P. officinalis* will deck a couple of beds, and will grow anywhere. *P. virginica* is as good as either of them but a little taller. Division.

Melitta melissophyllum of our woods, grows about a foot high, it being beaten by the Swiss form (*M. melissophyllum alpina*), which is dwarfer and more profuse-blooming. The flowers are flesh-coloured and fine. Division.

Heuchera glabra, grows about 1 foot high, has very pretty pink flowers in May, makes a lovely bed, and is increased by division.

Saponaria ocymoides with its dense cushions of pink, makes one of the loveliest of beds. It is an evergreen trailer, doing best in light soils, and is increased by cuttings, which root freely in sandy soil in a shady border.

To these may be added the rose Siberian Violet (*Viola Krockeri*); *Pæonia anomala*, with red flowers; *P. decora*, purplish red; *P. lobata*, with rosy flowers; the double form of *P. tenuifolia* being fine, and *P. tenuifolia*, good. Nor must we omit *Corydalis bulbosa*, a pretty pink-flowering tuberous-rooted plant, which prefers lightish soil, but will grow anywhere, and when we have a bed of *Dielytra spectabilis* in pots, which is most excellent, only it blooms quite late enough, we must rely on Primroses for the rest that is to be done towards decorating the flower garden with red flowers in spring.

Of these the pretty reddish purple varieties of the *Primula auricula* are excellent; *P. Allioni*, *P. altaica*, the lovely *P. cortusoides*, the pretty *P. ciliata*, and the handsome Danish *P. stricta*, are all excellent. The double red Primrose of gardens (*P. vulgaris plena-rubra*), the double purple, and others in red shades are excellent in beds by themselves, as margins to others, or associated with other plants, nothing being prettier than a bed of double red Primroses edged with white double Daisies; and, last of all, the different forms of *Polyanthus*, whether single or double, are very fine.

As regards other plants, we have Pansies in many shades of colour, and many other really good early-flowering plants might be found, and brought into use as spring ornaments to the flower garden if, only, all of us would set to in earnest, and having found a plant blooming early communicate its name to others through the medium of the horticultural press.

Having the plants named, or others equal to them, in stock, and they should be stiff strong plants grown in an open situation, and not huddled together in some out-of-the-way corner, they are to be taken up with nice balls. Whether they be deciduous or evergreen plants, herbaceous, bulbous, or tuberous-rooted, they must all be taken up with some earth to them, at least as much of it as adheres to the roots, be planted immediately (closely so as to cover the surface if evergreen, or so as to do so if deciduous by the time they flower), in their several positions, doing the work carefully so as not to break or injure either the tops or roots. This may be done any time in mild weather from October to the middle of February, and when the ground is in good working order so as to insure neatness. It may be necessary to water after planting, but not often, once at planting being enough to settle the earth about the roots. This even is misapplied if the weather be at all wet or showery. A reserve of most kinds should be kept back to fill up any blanks that may occur during the winter, the beds being made good by the beginning of March.

By the last week in May, or first week in June, all of them, owing to their places being required for summer bedding plants, must be cleared off, and this is done in the same manner as at planting, taking them up with a ball, and removing them to their summer quarters, which should be an open yet sheltered sunny situation. After removal water well, especially if the roots are bulbous or tuberous, and continue to do so according to the weather until the plants become well re-established. Such as have done blooming and are in a fit state for propagation should be divided, as in the case of *Primulas*, or cuttings or slips should be inserted, as in the case of *Alyssums* and *Wallflowers*, or seeds sown if propagation is to be effected in that way. If bulbous-rooted they are best divided at the time of planting, if that be in October, but if later it should be done when the foliage decays.

G. ABBEY.

NOTES ON A COLLECTION OF GRAPE VINES

FRUITED IN POTS IN THE SUMMER OF 1864.

In the month of March, 1864, I took from my collection of Grape Vines, one plant of each of forty-four sorts, and placed them in a cool vinery with the view of testing. 1. Their suitability for pot culture. 2. Their quality. 3. Their comparative earliness. The pots were placed on slates so that

the roots could not escape from the pots; the rods were trained up the rafters of the house, and the plants fully supplied with weak manure water. The whole of the plants were but one year old and of equal strength.

I shall proceed to describe them in the order in which they ripened. Those marked B, are Black; W, White Grapes.

1. Chasselas Vibert, W. Ripe August 26th. Produced six medium-sized bunches of large well-flavoured berries. It was the earliest and best of the Sweetwater race, and set better than any other.

2. Grove-End Sweetwater, W. Ripe September 10th. Produced six small bunches, rather loose. Berries large. First-rate.

3. Muscat de Juillet, B. Ripe September 10th. Produced three small bunches. Berries small.

4. Chasselas de Falloux, W. Ripe September 10th. Produced ten large bunches. Berries large. A good pot Vine.

5. Chasselas Bulberry, W. Ripe September 10th. Produced ten large bunches. Berries of medium size; flavour good.

6. Almeria, W. Ripe September 10th. Produced ten large bunches. Berries large. A good pot Vine.

7. General Della Marmora, W. Ripe September 10th. Produced ten large bunches. Berries large; flavour above the average. Quite first-rate.

8. Royal Muscadine, W. Ripe September 10th. Produced eight medium-sized bunches. Berries of medium-size. First-rate.

9. Foster's White Seedling, W. Ripe September 13th. Produced eight large bunches. Berries large. A hardy good Grape.

10. Muscat St. Laurent, W. Ripe September 13th. Produced six small bunches. A rich-looking Grape of good flavour. Hangs well.

11. Chasselas Duhamel, W. Ripe September 16th. Produced four small bunches. Berries large. Flavour very good.

12. Chaptal, W. Ripe September 16th. Produced ten large bunches. Berries of medium size.

13. Black Hamburgh, B. Ripe September 18th. Produced seven large bunches. Berries large. Still one of the best for pot culture.

14. White Frontignan, W. Ripe September 18th. Produced six medium-sized bunches. Berries of medium size. First-rate.

15. Buckland Sweetwater, W. Ripe September 18th. Produced six large bunches. Berries large. A good pot Vine.

16. Trentham Black, B. Ripe September 20th. Produced one small bunch with large berries. Of doubtful value for pot culture.

17. Chasselas Musqué, W. Ripe September 20th. Produced seven medium-sized bunches which did not crack; ripened well. Berries large; of exquisite flavour.

18. Esperione, B. Ripe September 20th. Produced ten large bunches. Berries large; flavour good. A first-rate pot Vine.

19. Pope's Hamburgh, B. Ripe September 20th. Produced ten large bunches. Berries large. A first-rate pot Vine.

20. Black Frontignan, B. Ripe September 26th. Produced nine medium-sized bunches. Berries small. Not so good as the White Frontignan.

21. Muscat Hamburgh, B. Ripe September 26th. Produced seven small bunches; shanked. Berries large; flavour exquisite.

22. Alicante (French), apparently Black St. Peter's, B. Ripe September 26th. Produced ten small bunches. Berries of medium size; flavour first-rate.

23. Madeira Muscat, B. Ripe September 26th. Produced three small bunches. Berries small, of exquisite flavour.

24. Perle Impériale, W. Ripe September 26th. Produced six large bunches. Berries large, of a rich golden hue; skin thick; flesh solid; flavour good. Hangs well.

25. Sarbelle Muscat, B. Ripe October 1st. Produced eight small bunches. Berries of medium size.

26. Purple Constantia, B. Ripe October 1st. Produced eleven medium-sized bunches. Berries of medium size; flavour exquisite. A good pot Vine.

27. Ahbee, W. Ripe October 1st. Produced four large

bunches. Berries large and handsome; slightly acid. Not so good as Raisin de Calabre.

28. Black Prince, B. Ripe October 6th. Produced three large bunches. Berries large. First-rate.

29. Chasselas de Fontainebleau Rouge Hâtif, B. Ripe October 6th. Produced seven small bunches. Berries small.

30. Muscat Noir de Jura, B. Ripe October 6th. Produced six medium-sized bunches. Berries large. A good hardy sort. Foliage beautiful in autumn.

31. Ingram's Prolific Muscat, B. Ripe October 6th. Produced seven small bunches. Berries small; flavour good.

32. Raisin de Calabre, W. Ripe October 6th. Produced three large bunches. Berries large and handsome. Flesh firm; flavour good. Hangs well.

33. Chavoush, W. Ripe October 6th. Produced three large bunches. Berries large. A fine-looking Grape.

34. Cambridge Botanic Garden, B. Ripe October 6th. Produced three large bunches. Berries large.

35. White Romain, W. Ripe October 10th. Produced ten medium-sized bunches. Berries of medium size. A good pot Vine.

36. Lady Downes' Seedling, B. Ripe October 10th. Produced seven medium-sized bunches. Berries large. A good pot Vine.

37. Black Monukka, B. Ripe October 15th. Produced four large bunches. Berries large, conical, and stoneless; flavour fine.

38. West's St. Peter's, B. Ripe October 18th. Produced six small bunches. Berries large. Quite first-rate.

39. Morocco Prince, B. Ripe October 20th. Produced eleven medium-sized bunches. Berries large. Quite first-rate.

40. Burchardt's Prince, B. Ripe October 20th. Produced eight large bunches. Berries large. Not sufficiently known and valued. Quite first-rate.

41. Kempsey Alicante, B. Ripe October 20th. Produced seven large bunches. Berries large. A good pot Vine.

Three varieties—Trebbiano, Mill Hill Hamburg, and Duc de Malakoff, bore no fruit.

The large bunches averaged 1 lb. in weight; those of medium size three-quarters of a pound; the small half a pound.

Now, for the application of these facts. With an ordinary greenhouse or vinery a good supply of Grapes, White and Black, and of various flavour, may be secured for at least three months in the year at a very moderate cost of money and trouble. The entire weight of fruit gathered off the forty-one one-year-old Vines may be fairly set down at rather more than 2 cwt. Had they been placed where the roots could have been passed through the holes at the bottom of the pots, I doubt not that a heavier crop would have been secured; but I could not conveniently accomplish this, nor did I deem it necessary for my purpose.

Reasoning from this and previous experiments, for seven of the best pot Vines I should choose for weight—Esperione, Pope's Hamburg, Chasselas de Falloux, Chasselas Bulberry, Almeria, General Della Marmora, and Chaptal; for an additional seven—Black Hamburg, Morocco Prince, Burchardt's Prince, Foster's White Seedling, Purple Constantia, Kempsey Alicante, and White Romain. Chasselas Vibert should be added for its earliness.—WILLIAM PAUL *Waltham Cross, N.*

ROSES PAST, PRESENT, AND FUTURE.

HOWEVER desirable the plan proposed by Mr. Curtis (and anything on the Rose, from one bearing that name ought to be listened to), I fear it is impracticable. There is not the same spirit in France as to exhibiting that there is here; for although the Central Society of Horticulture has held meetings somewhat similar to the Floral Committee of the Horticultural Society here, yet very few of the growers, even around Paris, thought it worth while to send their seedlings. Something of the kind was suggested to me some years ago, but I could not do it.

I had hoped to have continued my dissection of the Rose lists this week, but have been prevented; and I find that there is a mistake in the printing of the first paper. In speaking of M. Eugène Verdier's Roses I am made to say I have selected "these;" it should be "three"—the two Hybrid Perpetuals mentioned, and Maréchal Niel, Tea, which

I shall speak of by-and-by. As far as my judgment and knowledge of the Paris Roses are concerned, Duchesse de Medina Cœli, Duchesse de Caylus, and Rushton Radclyffe, will be the leading varieties. In a letter received from M. Charles Verdier the other day he speaks highly of Duc de Wellington (Granger) as being a very fine Rose.

What a splendid season it is! I have now two beautiful month which were first-rate; and have now two beautiful flowers of Devoniensis and Madame Joseph Halpin, taken from standards, in the vases on my chimneypiece—quite refreshing on Lord Mayor's-day. Although the term Hybrid Perpetual is abused, yet to be able to cut blooms of *Senateur Vaisse*, *Général Jacqueminot*, &c., as I have done from my small collection, in the month of November, entitles them to our gratitude.—D., *Deal*.

LARGE CROPS OF PEACHES.

MR. DALY (page 848), expresses a wish that some remarks may be made on his communication about his crops of Peaches. If the Englishman referred to means the undersigned I make no apology for taking precedence, as I am entitled to correct an error. The Peaches gathered from my three trees this year were 560, and not 510. Of the quality of these Peaches the best proof is their winning the first prize at Blandford, Baron Hambro being second, and that they were good enough to send to Mr. Eyles for the *déjeuner* at the Kensington Exhibition in September. I say quality with emphasis, because it is simply ridiculous to talk of quantity without quality. The *quantitas vocis* is a good thing, but the *qualitas rei* is a better thing. The *qualitas* of a Peach depends (supposing the sort to be good), rather on the *size* of the Peach than on the *number* of Peaches on the tree. The heaviest crop that I ever grew on my three trees, which were, and are still, about 52 or 53 feet wide by 9 feet high, was 1024. What was the effect of this unwise crop? The next year I had only 197 Peaches. From this I learnt that to overdo is to undo.

I do not speak in defiance of Providence, still less will I lay a charge against Providence if I fail; but I firmly believe that I shall be able to gather next year 500 Peaches from the above trees. This will make 4500 Peaches in nine years off two trees now in their forty-sixth year, and off one tree now in its twenty-ninth year, the men being alive in this parish who remember their being planted. After the crop of 197 Peaches I believe that the next crop was 775. Lord Portman's present gardener, Mr. Leach, came that year to inspect the trees. I had taken off a vast quantity, and had left on the unwise number of 1200. Mr. Leach said, "I advise you to take off one-half at least." Well, I am never prejudiced or obstinate. I therefore, though they were thoroughly separated before, thinned them down to a number that allowed me to gather 775 good Peaches, not tasteless witherings. I fancy that the next year the crop gathered was about 468. I say fancy, because I have not my references here. This leads me to diverge.

This summer my old and valued friend Mr. Shipp, bookseller, of Blandford, came here to see the Roses and eat Strawberries. I hardly need say that the two hallucinated him. Being here, he said, "I wish you would let me have your articles already published. I will cut them out and paste them into an album free of cost, with thanks for the amusement and edification that I have received from them." Hence, as he has my periodicals, I must be forgiven for an erratum.

To return. I think that in an article on Peaches in my "Florist," now in Blandford for the above purpose, Mr. Powell, of the Royal Gardens at Frogmore, has said that three Peaches per square foot are sufficient. I am not expert enough to say much on this matter; but I firmly believe that what we gain in numbers by overcropping we lose in weight, size, and quality this year, and next year in quantity and quality. I believe yet further, that where we leave on six Peaches the Jerseyman and Frenchmen leave on three.

Mr. Daly's crops in 1863 and 1864 are certainly very great; but, will he not say in due time, "There is nothing like moderation and a good annual supply?" What sort of land has he? It must be a land of "nuggets" to stand for any length of time such heavy cropping. I for one shall

be glad to know what is the crop of 1885. I am very glad to see that he manages his Peach trees as regards protection much the same as myself; but I fear our error is a leaning towards overcropping. I do not attribute the loss of his leaves and the non-setting of his fruit to the same causes as he does—quite the contrary. It was not from keeping the sheets on, but probably from having left them off on “mild nights,” when the frost caught him napping. In bad weather I leave them on for days and nights together. When will people learn that the leaves of a Peach tree are more tender at their unfolding than even the blossoms?

I went this year to review my oldest friend's large garden near here. What did I see? A capital crop of Peaches protected by tiffany; but the north-east wind and frosts had gone through the tiffany, and blistered the leaves almost to a totality. The leaves looked as if a mole had burrowed between the cuticles. These blistered leaves must drop; what is to become of the tree and fruit till new ones spring up? The tree, being deprived of lungs at such a time, must suffer in its general health, and the fruit can never be of first-rate quality. Pines, Grapes, Ferns are well done at my friend's: the two things wanting there are glass casings and more pumps. In such a large garden, with so many trees, it is of no use to talk of sheeting, which is better than any glass casing for the general health of the trees, unless it can be drawn up and let down by rollers. Where there are only a few trees, and where the amateur takes particular interest in them, sheets will (put on at 4 P.M. and taken off at 10 A.M., and only left on in discourteous weather), beat everything. The trees are much more healthy, thus protected, than when permanently stewed under glass. Had I a glass casing I would, in torrid summers, remove every bit of it after the danger is over. The mess made under glass arises chiefly from a want of free circulation of air, and from deficient watering.

In conclusion, I must say that it is not the fault of gardeners that their Peaches fail; they cannot do impossibilities. A Peach tree is as much an exotic as a Muscat. The Muscat is protected, but the poor Peach tree, blossoms and leaves, is suffered to “rough it.” The wood this year is nicely ripened, and the leaves drop fast. I am like Mr. Micawber in the Fleet prison, hoping some good thing will “turn up!”—W. F. RADCLIFFE, *Rushton*.

CULTURE OF THE ALPINE STRAWBERRY.

NOTWITHSTANDING the excellence of the Alpine Strawberry as a dessert fruit, comparatively little attention has been paid to its cultivation. This is evidenced by the fact, that we too often see it grown in some out-of-the-way place, or trampled under foot, as if kept for the mere sake of having the variety. Consequently, it is no wonder we so often see such small fruit from this valuable Strawberry. Knowing its value, and that its culture should be more cared for, I offer to your readers a few notes on the mode of cultivation I have practised with good results.

To obtain seed, procure some fine and well-ripened fruit; bruise it, and spread it over some thick paper for drying. Place it out in some dry airy place, not allowing the damp to affect it; when dry scrape it off from the paper, and store it away till the following March; then sow in pans, just covering the seeds with light soil. Place the pans in gentle heat until the seedlings are up and sufficiently strong; then gradually harden them off. Never allow the plants to become too dry. When sufficiently hardened, prick them out, in a rich and open piece of ground, in rows 9 inches asunder, allowing 4 inches between the plants in the rows. Keep all runners cut off, and give water when required. Nothing more will be wanted but keeping the plants free from weeds during summer, until the following spring, then a piece of ground in an open position must be provided, highly manured, dug, or if well trenched all the better. Choose a fine day for transplanting the plants to their fruiting place—a care that cannot be too strongly recommended for all planting.

The ground being ready for planting, mark out the rows 2 feet apart; then with a plunging-fork take up the plants, and set them in their new quarters a foot apart in the rows. Neatly finish off the ground, and never allow weeds

to encroach. Keep all runners cut off during the summer, which will enable the plants to swell their fruit better. Watering is one of the essentials for the Strawberry, therefore it must be duly done. Another point is to cover the surface round the plants with some kind of material, such as flints, broken tiles, or slates. I use flints, which not only allow the water to pass more readily to the roots of the plants, but keep the ground near the roots more moist.

Following the above hints, one may have ripe Alpine Strawberries from the time the other larger kinds have done bearing until the end of October, and often later; and thus the labour bestowed on this Strawberry will be amply compensated, and especially to those who, like myself, have many dishes to make up every evening.—C. P.

VISITS TO GARDENS PUBLIC AND PRIVATE.

MESSES. F. & A. SMITH, DULWICH.

As some years had elapsed since I had been able to visit the well-known nursery at Dulwich, I was not sorry of the opportunity afforded me in the month of September of again going through the extensive houses which cover so large a space in this nursery. When I was there before, the nursery was in a transition state. It had formerly been one from which Covent Garden Market had been largely supplied with those plants which are not indeed

“born to bloom unseen,
And waste their sweetness on the desert air;”

but are born to die an untimely death, killed by the dust, and dirt, and gas, and fire heat of London rooms. The Messrs. Smith were then getting out of this, and at the present time the houses and pits that used to be filled with such plants are occupied with the choicer and more valuable ones that are comprised in a good nursery stock. The success which has attended their efforts at hybridisation in the many beautiful varieties of *Cinerarias*, *Azaleas*, &c., which they have from time to time brought before the public show that they are not novices at such things; while their magnificent show of *Balsams* has always been acknowledged as about the finest in the kingdom, and, as I witnessed, there is no retrogression in this department.

It would be impossible for me to describe (and were I to do so it would be a useless attempt), the whole of the plants contained in this extensive establishment; and I shall therefore select a few such salient points as seem to me to especially mark it. Thus their collection of *Zonale Geraniums* is probably as extensive as any in the kingdom, comprising every variety of home and foreign growth; while their own establishment has afforded them thousands of seedlings, many of them of great promise, especially amongst those *Tricolor* variegated ones of which Mrs. Pollock is the type, and on which there is now so great a run. The Messrs. Smith have largely hybridised in this class, and some of their results are very curious. Selecting one of the plain yellow-leaved sorts, such as *Cloth of Gold*, for the mother plant, they have hybridised with some of those broad-zoned varieties of which there is a plentiful assortment, and thus the combination is obtained; while the bright flame, varying from light pink to brilliant crimson, is found in a large proportion of the issue. In some the marking partakes more of a marbled character, being irregularly disposed over the whole leaf. Then, again, there were plants which were absolutely double, half the plant was green and half variegated. Nor was this confined to the leaves only: the stalk was in the same way divided, one half of it being green, the other marked. Whatever may be the cause of variegation, be it disease or not, some light might surely be thrown upon it, by such curious results as these, in the hands of a botanist. Then, again, some plants run up quite green throughout. To the eye of an inexperienced person they would seem to be useless; but Mr. Smith waits, and strangely enough they break, from the base of the stem very frequently, quite variegated. Others again, which show symptoms, very faint it may be, of variegation, when potted into richer soil break into colour. While alluding to this subject I may mention that I have this autumn put in a large quantity of cuttings of Mrs. Pollock, and that I have not lost one. My plan is to put three or four cuttings in a pot, and place them in the sunny part of my little greenhouse.

I mention this because some persons have remarked to me that it is a queer thing to propagate. Amongst other bedding Geraniums I noticed as very good Prince of Orange, an orange scarlet, and two others (under numbers), which promise to be acquisitions—20,64 and 58,64; the former of these is a very fine flower.

Azaleas form a large feature in this establishment, upwards of ten thousand small plants alone being grown, and, as we know, many fine sorts have come from here. Flag of Truce fully bears out the high estimation formed of it when it was first exhibited. The foliage is handsome, while the purity of the white exceeds that of nearly all the single varieties. Thrips is a great plague here, owing in a great measure to the existence of some Thorn hedges, which harbour this pest; and the experience of the Messrs. Smith differs from that of Mr. Barnes and others, inasmuch as they find tobacco of very little use, but use a preparation something like Gishurst, which they say, as indeed I could see, effectually stops its ravages. There was also a quantity of their pretty rosy pink Azalea Clapham Beauty, which has, moreover, the advantage of being very early in bloom; and possessing as it does an excellent habit, it is a very desirable plant for the spring decoration of the greenhouse. *Crispiflora rosea*, an improvement on the old and pretty *crispiflora*, is also largely grown, and meets with a ready sale.

In the stoves I found a very excellent assortment both in old and young plants, of the rarer and more valuable plants that have been introduced of late years. *Alocasia metallica*, *Lowii*, and *zebrina* were excellently done; while *Cyperus alternifolius variegatus* was in greater masses than I have anywhere seen it. Here was also a good stock of the very pretty *Saxifraga Fortunei*, which will ere long find its way into many a cottage window, supplanting its plainer relative, which is now so extensively grown by cottagers.

In the cooler houses many of the recent introductions from Japan were found, such as *Thujopsis dolabrata variegata*, *Retinosporas*, *Osmanthus*, *Eurya*—plants which, if they only prove hardy, cannot fail in a few years to make a considerable change in the landscape gardening of our days. Many of the new varieties of Zonal Geraniums, which are more adapted for greenhouse culture than the open air, were also to be found here. Amongst them I noticed *Marie L'Abbé*, *Mrs. Thiers*, *Ornement des Massifs*, a curious plum-shaded scarlet.

Fuchsia Pillar of Gold, which was originated in this establishment, has proved itself a very useful ornamental plant, and when well grown, and mixed with others, the effect is excellent. There were large quantities of it grown here; but to my mind it looked better when placed amongst other plants than when used in large quantities. *Cloth of Gold* is another somewhat similar variety, which deserves all the praise that has been given to it, affording a very pretty contrast to the previous one. The other varieties of *Fuchsias* were also to be found here in large quantities.

In Balsams the Messrs. Smith are certainly in advance of all others, and I found pit after pit filled with plants which were maturing their seed. The different varieties are all kept perfectly distinct, and I can only say that I did not see one plant with single flowers throughout the thousands that were there; so that if single flowers are obtained from their seed it must be owing to some mismanagement in their culture; and as I had myself been disappointed, I asked Mr. Smith how it was that I came to have so many single flowers. He quietly asked me, "How do you grow them?" I told him that I potted them off singly, and then as the flower-buds showed rubbed these off, repotting them into larger-sized pots, and then trusting to the later buds for the bloom. "I thought so," was the rejoinder. "It is the earlier buds that ought to be depended on; and the plan is to leave them on and grow the plants well, so as to develop the flowers well." Some of these were very fine, quite like variegated *Camellias*, while those of a plum-coloured shade were truly magnificent.

It will thus be seen from this necessarily brief and hurried sketch, that in point of interest this nursery is not behind any of its metropolitan neighbours, and that enterprise, skill, and energy are at work to give it a foremost place. This Messrs. Smith have effected at a very large outlay; but the great sale that their productions have will, I doubt not,

amply remunerate them. I need hardly add that I feel sure that any one visiting this nursery, which lies conveniently between the Crystal Palace and Victoria line, and the London, Chatham, and Dover, will meet with the greatest civility, and be politely shown everything of interest pertaining to it.—D., Deal.

WINTER DECORATION OF THE FLOWER GARDEN.

I HAVE read with considerable interest the remarks of Mr. G. Abbey on the winter decoration of the flower garden. The subject deserves the attention both of the writers and readers of your journal. The present system of flower gardening renders it necessary that something should be done to remove the nakedness of the beds throughout the winter season. Geraniums, *Calceolarias*, &c., are gorgeous enough through the summer months; but by the middle or end of October, if not absolutely killed their beauty is entirely gone, and then the sooner they are taken away the better. But it would cause a very serious blank if the beds had to remain empty and bare from that time till the third or fourth week in May, the time when bedding plants would be again brought forth to occupy the place of their predecessors.

It becomes, therefore, a matter for serious consideration which way the deficiency would be best supplied. Of course the plants must be hardy to stand the rigours of the winter, but they should also be of an ornamental character. I know of nothing so suitable as evergreen shrubs, with their various shades of green and different habits of growth. I am not much in love with deciduous shrubs for the purpose, whether they be flowering or otherwise, as they look so bare when the leaves are fallen, nakedness being the object sought to be removed.

Your correspondent has given a list of those evergreens which are most suitable for decorating the beds when divested of their summer occupants, and any one taking that list or selecting from it will not go astray in the matter.

In reference to planting them, however, there may be a difference of opinion. I have been in the habit of following a plan different from the one recommended by Mr. Abbey, and one which some might feel disposed to adopt. If so, I think they will be satisfied with the result.

Your correspondent recommends that two-thirds of the beds be filled with shrubs, evergreen and deciduous, and one-third with bulbs and spring-flowering plants, and that each bed be devoted to one separate kind—grouping them, in fact. This is not my method. I prefer planting shrubs in every bed, but not to fill any of them, and to mix the different kinds together, carefully distributing each so as to secure variety and at the same time uniformity. The more conspicuous and distinct sorts are particularly attended to in this respect, *Aucubas* and *Irish Yews*, for instance; for wherever one of these is planted a similar one to match is placed, so as to balance, as it were, one side with the other. *Yews* should not be too numerous; one here and there to take off the flatness is quite sufficient.

The beds are 4 feet in width, the walks 2 feet. In small circular beds I place one plant in the centre. In the middle beds, which are nearly square, I place five—a centre, and one near each corner. The largest contain seven or eight, and the others about three each. When thus planted the garden presents a very striking appearance, exhibiting a great variety both of form and colour. Probably where there are large beds on grass, and these disconnected and far apart, the plan of your correspondent may be the best; but in geometric designs containing a number of comparatively small beds close together, I think it preferable to adopt the open plan above described.

Every bed is planted with clusters of the *Crocus*; and here again I follow the mixing system—not, however, with each cluster, which is of one distinct kind, but each bed contains clusters of each colour, yellow, blue, and white repeated all the way round near the edge at about a foot apart. Being planted near the edge they are out of the way of the bedding plants, and consequently are not disturbed when their flowering season is over. I find it necessary, however, to take them up every three or four years, for the double purpose of dividing them and planting them

at a greater depth, as they work up nearer to the surface every year by forming the young bulbs on the top of the old ones.

I should have planted a ring of Tulips or Hyacinths round inside the Crocuses; but these being beyond my reach, I have to make the best of the materials at hand, and the Crocuses on a sunny day in February present a picture which is not surpassed by Geraniums, &c., in the month of August.

The shrubs are not potted, but are removed in spring and autumn without the slightest injury, except the Portugal Laurels, which will not bear the constant removal, soon presenting a sickly appearance. All the others do well.—T. JONES, Manchester.

[We think that it is as well to print this without much comment. Edging beds with evergreens would also be a good idea, using Box, Ivy, Holly, &c., a foot high.]

THE ROYAL HORTICULTURAL SOCIETY'S CHRYSANthemum SHOW,

Nov. 9th, 10th, and 11th.

THE opening-day was unfortunately chosen, being that on which those of high degree meet to celebrate the anniversary of the birth of England's hope and heir, and that, too, on which portly aldermen, good citizens, and many guests are wont to enjoy the splendid hospitalities of the Mansion House and City halls. There could, then, be no reasonable prospect of a large attendance of visitors, and a large attendance there certainly was not, the number present in the conservatory where the "show" was held never amounting at an outside computation to three score at any one time.

But what of the Show itself? There was but one exhibitor of specimen plants—Mr. Adam Forsyth, of Stoke Newington; there were but two collections of cut blooms, one furnished by the same exhibitor, the other by Messrs. Downie, Laird, and Laing, and there was but one collection of new varieties—that of Mr. Ingram, of the Royal Gardens, Frogmore. The unfortunate choice of an opening-day could have little, if anything, to do with the lack of competition, and this can only be accounted for by the inducement offered being certificates, bearing a money value, it is true, according to the receipts, but which in the present case must have been less valuable than American greenbacks. It is evident that without a more solid inducement than these certificates exhibitors will not come forward, and there will be no show; and, on the other hand, if there is nothing worthy of the name of a show, the public will not come if they become aware of that fact, or, what is more mischievous still, coming they go away angry and disgusted at having put themselves to much inconvenience, and wasted their time and money to meet with a disappointment. Among Mr. Forsyth's specimen plants which, however, had not generally arrived at their full perfection, there were good examples of Lord Banelagh, orange red; Rifleman, ruby; Prince Albert, crimson; Bernard Palissy, a showy orange; Florence Mary, and some others. In Pompons we remarked nice standards of Cedo Nulli and the Golden and Lilac varieties of the same kind.

Of cut blooms, as already stated, there were only two exhibitions; that of twenty-four, from Mr. Forsyth, contained good blooms of Queen of England, Mrs. W. Holborn, Alfred Salter, Novelty, and other leading kinds; that of twelve from Messrs. Downie & Co. contained some blooms of remarkable size. Of the beautiful orange Jardin des Plantes there were blooms upwards of 4 inches across, while Lady St. Clair (white), was of even larger size. Of Alfred Salter there was an immense bloom, as well as large ones of Her Majesty, and Nil Desperandum.

Of Mr. Ingram's seedling Pompons Alice, a pretty free-flowering yellow, received a second-class certificate; and a similar award was made to Princess Beatrice, brownish red, the florets tipped and edged with yellow.

The only other feature in the Show worthy of remark was contributed by Mr. Veitch, of the Royal Exotic Nursery, being *Cattleya labiata* with five splendid spikes of its beautiful crimson lilac blooms, *Lycaste Skinneri* with eight fine spikes, and the interesting hybrid *Cattleya Dominiana alba*,

white, with the front of the lip purplish rose, and a delicate yellow tinge in the base.

It is due to Mr. Eyles to state that scanty as the materials were they were made to present the best possible appearance by the skill with which they were arranged. Chrysanthemums, plants of the Society's own, were placed by the sides of the main conservatory walk, whilst the baskets along the front were filled with Chrysanthemums and Geraniums, edged with *Selaginella denticulata*. *Centaurea candidissima* was introduced with good effect in some of the baskets. The eastern glazed entrance had likewise an interesting appearance, especially the further end, where a mixed bank of shrubs, Chrysanthemums, &c., served to shut out the view of the door.

This intended Exhibition, for Exhibition, except in a sense disgraceful to the Society, it was not, is only one of many—very many—evidences that the management is in totally incompetent hands. We will only quote at present one additional evidence.

Sir Joseph Paxton, as chairman of the Show Committee—a Committee appointed to inquire what alterations in the Society's Exhibitions are desirable—wrote an excellent letter, lithographed for circulation among the Fellows, asking for their opinions and information how they would co-operate in sustaining weekly shows. Replies were requested to be sent by the 15th of October, yet some of the Fellows only received a copy of the circular on the 8th of November, and some have never received any at all!

FLORAL COMMITTEE, NOVEMBER 8TH.—But few specimens for examination made their appearance this day. Had not Messrs. Ivery, Dorking, most kindly sent a large and most interesting collection of their multifarious British Ferns, which received a special certificate, there would have been a very small exhibition. Messrs. Ivery sent several new forms or varieties of British Ferns, among them *Polystichum angulare grandiceps*, *P. angulare rotundatum*, *Athyrium Filix-femina Vernoniæ*, *A. Filix-femina Victoris*, all of which received first-class certificates. *Athyrium Filix-femina Barnesii*, and *A. Filix-femina tortile*, with *Scolopendrium vulgare marginato-papillosum*—well may we ask "what's in a name?"—will be seen again before their merits are decided upon. Messrs. Waterer & Godfrey sent *Cupressus Lawsoniana argentea*, a very distinct glaucous-looking plant—first-class certificate.

Mr. Ingram, Frogmore Gardens, sent seedling Pompon Chrysanthemums, neither new in colour nor distinct from others in cultivation:—Princess Beatrice, a yellowish buff, not unlike *Aurora borealis*, but smaller, a nice compact flower—second-class certificate; Alice, an early, very small-flowering variety, deep yellow—second-class certificate; Gipsy Girl, yellow and buff; Pretty Polly, orange yellow petals, tipped with brown; Princess Alexandra, a small white; Little Bob; and Canary Bird, with bright lemon-coloured flowers like Berrol. From Messrs. Lee, Hammer-smith, came a new species of *Epidendrum* (the name was missing) with dull purplish flowers, deep purple lip—first-class certificate; *Epiphyllum truncatum tricolor*, a very showy plant with bright scarlet flowers shaded with purple, and the backs of the petals having a bronzy tint—this is a great acquisition among the autumnal decorative plants—first-class certificate. From the same firm came also *Epiphyllum truncatum Salmonium marginatum* with crimson and white flowers.

Messrs. Downie, Laird, & Laing, sent twelve cut blooms of Chrysanthemum Queen of England, Jardin des Plantes, Lady St. Clair, and Striped Queen of England, three fine specimens of each—a special certificate was awarded them.

STOKE NEWINGTON CHRYSANthemum SHOW.

THE annual Exhibition of this Society took place on Thursday and Friday last, and was as great a success as the South Kensington one was a failure. Comparisons are said to be invidious, but no one who was at the Royal Horticultural Society's Show (we use the term for convenience) could help comparing what that Society, with all its high patronage, numerous supporters, and ancient prestige, then

effected, with what a few earnest amateurs accomplished without such powerful auxiliaries.

This year the Stoke Newington Show was held at the Tabernacle, Kingsland Road, instead of, as heretofore, at the Manor Rooms, and, being within a few yards of the railway station, was much more convenient of access. The display of specimen plants and cut blooms was even better than in former years, and not being scattered to fill space, was extremely effective. The arrangement was much the same as last year, the plants in pots being placed at the sides and ends of the room, whilst the cut blooms occupied the tabling in the centre, a row of pyramid Pompons running along the middle. It is not too much to say that there was not a bad specimen or bloom in the whole Show; a few might be defective, but they were amply compensated for by the excellence of the great majority.

For Six Plants Mr. Ward, Tottenham, was first, with Prince Albert, covered with its large crimson blooms, Golden Christine, Defiance, Annie Salter, Alma, and Lady Hardinge, all of which were large healthy plants, and in fine bloom. Mr. George, gardener to — Nicholson, Esq., Stamford Hill, came second with fine plants of Alma, Jewess, densely covered with its orange and red blooms, and very even as regards size, Little Harry, and Defiance. Mr. A. Forsyth, nurseryman, Stoke Newington, was third, with Vesta, Annie Salter, Lady Hardinge, fine, and others all good.

In the Class for Three Plants Mr. Howe, the Secretary, was first, with a magnificent specimen of Vesta 4 feet across, and with probably not less than one hundred fine blooms, Rifleman, and Lady Hardinge excellent. Mr. Forsyth was second—his Prince Albert was very fine; and Mr. George third.

In the Class for Six Pompons in eight-inch pots Mr. Ward was first. Salamon, Général Canrobert, and Duruflet, were remarkably fine, particularly the last, which was so densely set with bloom that there was not more than enough foliage left to set it off. Mr. Forsyth was second, having, among others, fine specimens of Cedo Nulli, Lilac Cedo Nulli, and Duruflet.

For Three pyramid Pompons, Mr. Butcher was first with nice plants of Cedo Nulli, Andromeda, and Général Canrobert; Mr. George second; and from Mr. Ward came Duruflet, Général Canrobert, and Cedo Nulli, in beautiful bloom, but they were not considered sufficiently pyramidal in their growth to entitle them to a prize.

Extra prizes were offered for the best two collections, and Mr. Howe carried off the first. His Prince Alfred had an extraordinary bloom, measuring $4\frac{1}{2}$ inches in diameter every way, and in fact forming a perfect ball. White Globe, in the same collection, was 4 inches across, and beautifully incurved, while of Lord Ranelagh, Lady Hardinge, Antonelli, Annie Salter, and Alma, the specimens were likewise fine. Mr. Forsyth was second, with excellent specimens of Beverley, Chevalier Domage, and others; and among Pompons, Golden Circle, and a very good standard Cedo Nulli.

The Cut Blooms formed an excellent and very effective display, and many of them were of extraordinary size and perfection. It would be tedious to enumerate the blooms exhibited in every stand, or even name the best where all were so good; we must, therefore, confine ourselves to stating that we observed a wonderfully fine bloom of Queen of England from Mr. Moxham, Lady St. Clair, White Globe, Lady Hardinge, Themis, Princess of Wales, varying considerably in colour but very beautiful, Prince Alfred, Jardin des Plantes, in some instances of astonishing size, Beverley, Nil Desperandum, and many others.

For Twenty-four Mr. Robinson, Islington, was first; Mr. Slade second; Mr. James third. Twelve, Mr. Moxham first; Mr. Ward third; the name of the winner of the second prize we omitted to take down. For Six, Mr. Moxham first; Mr. James second; and in another class for the same number, Mr. Howe first; and Mr. Butt second, the latter being first for a nice stand of Anemone-flowered varieties, and Mr. Snare second. Very good stands of thirty-six Anemone Pompons came from Mr. Ward and Mr. James, who took the first and second prizes respectively; and Mr. George had a first-class certificate for a seedling called Princess Dagmar, blush white with a high centre, which promises to be an acquisition. Several extra prizes were offered by members of the Society to winners in certain classes; three by Mr.

Salter for three blooms of Princess of Wales, and three for Robert James; three by Messrs. James & Howe for Robert James; and one by Mr. Snare for Jardin des Plantes. The last was taken by Mr. Cornwall, Kingsland, with some very fine blooms.

The exhibition, and the arrangements connected with it, reflected great credit on the Society and its Secretary, Mr. Howe, and we hope that it may continue to meet with that support which it so well deserves.

HEATING TWO PEACH-HOUSES.

I AM about heating two Peach-houses, standing upwards of 20 feet from a range of vineries which are about to be heated by hot-water. Of course I must take the flow and return pipes underground to the first Peach-house; but what I want to know is, How can I take a flow and return pipe to my second Peach-house without heating my first one? I have no sheds behind the houses, otherwise I would take them in that way. I intend forcing the first house, but only to assist No. 2 a little.—INQUIRER.

[We do not think it is possible to do what you propose—heat the second Peach-house without heating the first, except by having separate flow and return pipes for each. However, we see no necessity for this, as you mean to force the first house, and merely to assist the second. Let the flow and return go all the way; but join the flow and return in the first house by a semicircular joint, and shut off the circulation beyond by a valve or a stopcock. This will enable you to heat the first without heating the second. You will want more piping than this for the early house. When you do not want heat shut off from the other piping, and when you want heat in the second house without wanting it in the first, leave only the flow and the return, and counteract the little heat by more air. This will be every way better than taking a distinct flow and return to the second house under the ground. If you had given us the position of the houses we might have been able to advise better.]

GARDENER EMIGRATING TO NEW ZEALAND.

IN answer to the query of "J. C." as regards taking Strawberry plants to New Zealand, if some of our finer sorts could be taken they would, no doubt, be valuable, but good kinds can be had there. Tools should be taken, for almost everything in that way, clothing, and furniture, are from 50 to 75 per cent. dearer than in England. I have no doubt Quick would do well, as all our deciduous trees flourish there, and keep their leaves longer than in England. My friend took chestnuts, acorns, and the seeds of almost all our hardy trees; but said they were of little use, as there were plenty of all our common trees, as well as fruits and vegetables. He advises people to take a little of the seeds of the very best sorts of the following—Cabbage, Cauliflower, Peas, Radish, Cucumber (Melons will not do without a frame), Geraniums, Verbenas, Stocks, Asters, Delphiniums, and, in fact, the best of every kitchen vegetable and flower seed, as they will be handy; always, however, bear in mind that nearly all the trees, vegetables, and flowers which are grown in England are found there, being taken by former emigrants.

Geraniums, Verbenas, &c., will live out all the winter near a hedge where there is a little protection. Grass seeds may be grown there on a small scale, but it would be cheaper and better to take them. Were I going I would take all seeds that I might have saved, as well as all my friends could give me. My friend took chests of drawers, beds, blankets, carpets, linen, crockery, and all kinds of small articles, as these are dear there. Of course, this is only advice for married people; if single, take no furniture or household things. For the voyage take no hams or bacon, as pork and other good provisions in plenty are served out; but cheese, or anything that requires no cooking, is very handy. A few pounds of peppermint cakes or drops, or a few bottles of wine or spirits, a table-spoonful to be put into water when sickly, are very desirable. Also take plenty of Onions and preserves, as they are very good in sickness. Of course these instructions are for working people who

wish to save their money, as most luxuries can be bought on board by those who do not mind paying an increased price.—W. C.

LILIUM LANCIFOLIUM CULTURE.

It is not very generally known that the period at which *Lilium lancifolium* may be had in bloom, may be very greatly lengthened, and this simply by a system in the time at which different bulbs are to be started, the first quantity being by a very gentle system of forcing hastened into flower about the middle of July.

To effect this, carefully remove from the bulbs all decayed matter, old lifeless roots, &c., and set about potting them in the first week of January. Where pots of fine specimens are wanted choose 12-inch pots, giving them an efficient drainage. For soil use an admixture of good turfy yellow loam partially decomposed. I prefer that in which an abundance of white sandy grit is found. This should be chopped up into moderate-sized lumps, to be afterwards sifted to remove all the more dusty portions of the soil. The more turfy portions only ought to be used. With this mix a few lumps of charcoal, some well-decomposed leaf mould, adding a dash of silver sand. Fill the pots to within 3 inches of the top with these well mixed together, making the whole tolerably firm. Into this firmly press the bulbs, taking care not to bruise or otherwise injure the scales. Let the tips of the upper scales upon the bulb appear through the soil, placing the same firmly around them. This is very essential to all fresh-planted bulbs, &c. The number I generally place in a pot of the above size is from seven to nine. It depends whether any of them are likely to produce two stems upon the single bulb.

Any who may not wish to have large specimen pots, or may prefer to have them of a more portable size, cannot do better than choose seven-inch pots, in which four or five bulbs may be placed in a similar manner.

These smaller pots will not need half the care and attention that the larger ones do, as the same caution as to watering, &c., need not be observed. The large mass at this early season of the year getting so easily overlaid with moisture, will cause the soil, being without roots, to sour if great care is not observed.

Place the pots in a situation where they will receive a moderate amount of light and heat; the temperature not to be below that generally kept up in a greenhouse. As I have before observed, care should be taken, especially at this early season, in watering them. They will require none until the plants have made a start, when a thorough good soaking of tepid water will greatly benefit these. They should now be removed into a temperature of at least 55°, with light and air. When they have made a growth of 6 or 7 inches they can be removed to the more airy end of the greenhouse, or to a pit, from which the frost is excluded.

At the base of that portion of the growth which may be above the soil, a quantity of strong healthy roots may be observed; firmly cover these with some pieces of turfy loam, leaf mould, &c., sufficient to fill up the pot to within the customary distance from the rim. With occasional sprinklings overhead, and as they advance in growth more liberal root-waterings, they may, taking care to tie them when necessary, remain in this situation until the period of their flowering, which should be about the middle of July at the latest.

The next batch may be potted about the middle, or in the end of February. These should be treated precisely like the former, save that they will require no heat, but should be placed in any sheltered position until they show signs of growth, when they should be removed into a light, airy situation, where the frost cannot reach them, there to remain until they require staking, and are showing for flower, which will be about the end of August.

The next in succession are to be grown entirely in the open ground, where they will flower readily with the following simple treatment. Pick carefully out of the old soil every bulb. I dibble these out in the ground where they are to stand, four or five in a patch, taking care to place them some 5 or 6 inches deep. An American-bed I find to be the most suitable for them, especially one of those which for the want of better material is composed of an ad-

mixture of heavy sandy loam. These small bulbs, some of them scarcely more than a scale in size, perfect a growth sufficient in one season to flower in the following one, and thus I have annually in that spot a goodly bunch of these blooming more or less efficiently according to the season, and giving a succession of flowers from July until the frosts of autumn visit us.

These Lilies have the additional merit of being good flowers for travelling long distances without losing either beauty or fragrance. They should be taken off the main stalk with a reasonable quantity of the flower-stalk, at from two to four days before the period at which they would naturally expand, and if desired to be sent any distance before expanding, they only require to be placed where they will not become crushed, wrapped up in paper. I forward them from here each season by post to beyond Inverness.—W. EARLEY, *Digswell*.

ENVILLE HALL.

(Concluded from page 376.)

We now pass from the museum to the comparatively open lawn, to which we have already referred, to notice the singular mass of Limes, one being of the *parvifolia* or *microphylla* kind, and the other the common Lime (the *Tilia europea*). Both kinds now come so close together as to resemble almost one mass. The *parvifolia* seems to have been three trees planted closely to each other, but now appearing as one, and sweeping the ground with their healthy branches. The common Lime had only been one tree, and though lofty, the bole is not particularly large; but branches from that tree had touched the ground, layered themselves naturally, in the manner of the Banyan tree, had a good fight for pre-eminence on the principle of the law of the strongest, and now good-sized trees are rising, with but very slender branch-like connections between the old stems and the new ones, and the process has been repeated, and even now the small outside branches that sweep the ground are many of them beginning to take hold of the soil. The circumference of the heads of these trees is respectively 132 and 116 yards. We are a little in doubt whether the latter figures are correct. A part of this fine mass of Limes is seen in the accompanying engraving.

Without attempting to describe the varieties of Hollies and other evergreens in these grounds, we must content ourselves with mentioning particularly three fine trees—the first is a beautiful upright-growing deciduous Cypress, near the mansion; the second a splendid Chestnut (24), near the east end of the seahorse pool; and the third is a very fine plant of *Picea nobilis*, well planted on a lawn between that pool and the museum walk. This massive plant, well worthy of an engraving, is 34 feet in height, 66 feet in circumference of branches, and 4 feet 10 inches in girth of stem. From opposite the fine Chestnut fine views are obtained over the pool, and across the rising ground of the park up to the arched gates, &c.

The seahorse pool (23) is one of those combinations of the seemingly natural and the purely artistic, conjoined with the mythological, that never fail to delight. The beauty of the statuary (the heads of which appear in the engraving) is enhanced by the softening influence of the mirror of water, reflecting the shading of the evergreens and the drooping Willows that fringe its banks. We have become so dull in all that pertains to classic lore that we were unable to read the history the figures were no doubt intended to illustrate, so we just make a story for ourselves, which may do until the true one is told. The central figure we conclude to be Triton, the son and the trumpeter of Neptune, blowing his shell horn to arouse the sleepy but beautiful Nereids to come and take their morning gallopade, that will leave no sound of hoof or footfall behind it. Striking as this pool is when in repose, what shall we say of it when a water jet rises to the height of 80 feet, when numerous jets play and cross each other, and when amid the mist and the spray the beautiful rainbows are ever forming and disappearing, now aloft, now almost touching the water, chasing each other as if some unseen fairyland, and not this earth, were their destined home?

If we go a little southward from this pool to a higher walk (25), we obtain one of the finest views within the

dressed part of the demesne. Looking down upon the pool we see part of the water, and most of the statuary, and onwards, past the fine Chestnut (24) on the left, and the mass of Limes on the right, part of the conservatory terminates the view in the engraving; but the eye sweeps far beyond that, and takes in the tower and the flagstaff of the parish church, &c. This view is that which we have engraved.

From this same walk (25) on the plan, a fine view is obtained over the top of the pool of the serpentine ribbon-border (80), which, commencing in a low level near the west end of the pool, winds somewhat abruptly up the hill, the rising as well as the winding giving additional charms to its beauty. Both these borders are beautifully backed by evergreens, which reflected the bright colouring of the ribbons. They were thus planted on each side of the walk beginning at the grass verge:—*Cerastium tomentosum*, 18 inches in width, followed by *Lobelia speciosa*, *Aurea*

floribunda, *Calceolaria*, and old, bright, rather strong Scarlet Geraniums, each of these 18 inches in width, the same as the *Cerastium*. The dense planting, with the rise and bending of the borders, rendered them very attractive.

There is a beautiful Weeping Willow at the top of the seahorse pool; and between it and the terrace at the west end of Jordan's pool is a steep sloping bank of beautiful grass, the one pool being some 20 or 30 feet in height above the other. From the walk above this bank a fine view is obtained of part of the mansion over the head of the Willow, part of the seahorse pool, and onwards beyond the mansion, over part of the Scotch Firs, of the racecourse.

Jordan's pool (32), is much the largest, and has a brick wall all round its sides, and a nice boat-house. There is an island chiefly of the Alder, and some nice Oaks, Birches, and Willows fringing its banks. On the terrace at its west end are four very lofty vases filled with Scarlet Geraniums, and sculptured with the heads of celebrated warriors, poets, and



statesmen; but which our artisans of the black country have christened The Twelve Apostles, showing that they knew rather more of their Bible than the great names of the world's antiquity. The great attraction of this pool is its wonderful jet, which rises in a straight column of water and spray to the enormous height of 180 feet. The boatman by rowing to the jet puts on ever so many devices; but to us one lofty jet was the grand one. Many years ago we witnessed the jet of the Emperor fountain at Chatsworth, and though memory is deceitful, and the present is apt to drive out the past, this at Enville seemed the more lofty and magnificent. One great charm was, that we were privileged with the sight of numerous beautiful rainbows, two or three in the dashing spray at one time. We had never seen any but the slightest appearance of them in similar circumstances before, but here they were massive, and no sooner was one gone than another and another appeared. We stood with our backs to the sun which was shining brightly. Mr. Craw said he never saw anything so grand in that way before. There might

have been some peculiar condition in the atmosphere that helped to give us so many of these shifting, shading, coloured bows. We could not help wishing that they had been seen by some four thousand of our brethren of the black country as something of the beautiful to talk about for days and years to come. The gardens are open during summer for two days in the week, and frequently there are from three to four thousand visitors, Lord Stamford adding to his other liberality, the great kindness of having these fountains played half an hour each day for their gratification.

These fountains are supplied from a reservoir on the elevated sheep-walks which we afterwards visited, and which is itself filled by two engines of thirty-five horse-power each, and managed by an engineer and assistants. The size of this reservoir, strongly and securely built, is in length 435 feet, width 135 feet, and depth 10 feet, and it holds when full 4,110,750 gallons. In noticing such works and their results, we could not help reflecting, that though it is often a great thing for the designer to derive personal satisfaction

from his work, it is still a far greater and nobler result to be thus the means of imparting a high-toned gratification to the thousands who otherwise might have little opportunity of being influenced by such assemblages of the beautiful.

By a walk on the north side of this Jordan's pool, we pass the boat-house (33), a rustic bridge (36), and continuing our course through a dell with picturesque wooded banks on each side, we reach the bird cottage in the woods. This charming retreat would just have suited some hermit and anchorite of the olden time, to try at least, however vainly, if happiness could be gained by shutting the heart up from the associations and the sympathies of humanity. The cottage is roughly piled with blocks of brick, covered with grey sheets of lead, and has even bits of stained glass in the windows, but is comfortably finished within to meet the wants of its inmates. Leaving out of consideration at present the workman and his family who inhabit this sequestered spot, its chief charm consists in the picturesque arrangement of the trees and shrubs, a fine Oak tree at the entrance, and great numbers of fantailed pigeons, which with their pure snowy plumage, contrasted charmingly with the dark sombre Yews, among which they moved as coquetishly, as if they had never known what it was to be disturbed by the presence of a stranger.

From this point we retraced our steps, and climbed up a steep bank to the pagoda (34), placed at the western point of the dressed grounds, with the rich woods behind it. A cluster of flower-beds had previously ornamented the front of this pagoda, but with great good taste these had been removed, so that nothing of the little, even though beautiful, should interfere with the open expanse of lawn, and its side masses of evergreens and single specimens of Conifers arranged for picturesque effect, or distract the attention from glancing over a good portion of the pleasure grounds, the racecourse beyond, and a portion of the country on-wards to Dudley on the one hand, and the woodlands of Hagley Park on the other.

We forget from what point through the woods we went to the sheep-walk, and the reservoirs for the fountains, but we could not help noticing that the fine picturesque effect of these boundary woods was chiefly owing to the undulating character of the grounds, and the high crests and the deep valleys between them. In one of these is placed the seat in the valley, with a wide expanse of turf between the shelving mounds, which were clothed near the edges with fine Oaks and other trees, with their branches sweeping the rich pasture. From this seat on which we rested a fine view is obtained of the surrounding scenery; and the same may be more truly said of the rich and varied scenery seen from the rotunda, which itself forms a fine feature in the landscape as approaching Enville from Stourton Castle.

But not to weary our readers, we may just state that the last place we visited in the park were the arched gates that led through to the drive to the upper sheep-walks. The view from thence was rich and varied. On the left the eye sweeps over Jordan's pool in the valley, the corner of the serpentine ribbon-border, and other fine parts of the flower gardens, passes on to the tower of Enville Church, and farther on to the great expanse of the common of Highgate Heath, and the black hills beyond. In the middle view the eye sweeps over part of the seahorse pool, a part of the front of the museum, with its fine oriel windows, the towers and domes of the conservatory, a portion of the village of Enville, and obtains peeps of the glass houses in the kitchen garden, whilst a little to the right part of the mansion is seen through the trees, the distant windmill, and farther distant still the Sedgley and Dudley hills. On the right the eye sweeps down on the mansion, with the temple pool in front (not shown in plan), fringed with Firs, Willows, and other trees, and in the distance are seen the sombre Fir woods of the racecourse—the view altogether is so striking, that the visitors to Enville should endeavour to realise it.

We must now conclude with a few general observations.

1. As to the industry, cultural skill, refined taste, and general intelligence of the superintendent of these gardens, were we to attempt anything in the way of eulogy it would be summed up in a single word "*Circumspecte*"—Look around!

2. Few places owe more than Enville to the fine natural position, with its lofty undulating backgrounds. These

have been so improved by judicious planting, and leaving wide massive spaces for herbage, as to present a scene of rare contrasted beauty. Even in the more polished gardening departments, thanks to the good taste of the proprietors, and the various artists employed, none of these grand features have been obscured or frittered away by any of the so-called improvements of the day.

3. The style of flower-gardening adopted is one the most simple and unique. There is no such thing as a regular group of beds, which, by the disparity of their size and the irregularity of their outline, are made to unite to form a symmetrical whole. The only form or figure of a bed used is that most pleasing of all, the circle. Each of these circles, as planted by Mr. Craw, with its centre and bordering, is perfect in itself. Where numbers of these are placed in masses, as south of the conservatory, and north of the ribbon-border, each circle is not only complete in itself, but it is planted so as to balance, contrast, or shade, with the circles near it, so that there is as much care taken in the planting as if the clumps belonged to a regular group. A look at the very reduced ground plan would lead the reader to suppose that these circles were crowded together so as to do away with the feeling of repose, but that is not so in reality, and this any one may perceive who will recollect that each of these usual-sized circles is from 18 to 20 feet in diameter, as then he will see that the spaces of lawn between them are wide. To compensate for even the appearance of crowding beds here, there are but few on the fine open lawns north and west of the conservatory; and perhaps the large circles there might be lessened in number with advantage. With all our love for the circle, however, and beautifully as these beds were filled, there seemed a degree of sameness even as to their outline, and the regularity with which they were placed upon the ground, so that, though we would not wish the present system to be altered, we would wish it to be so far broken in upon as to give variety even in outline. Suppose, for instance, that a simple regular group were placed on each side of the walk in front of the conservatory, not only would a new feature, as well as variety, be produced, but the clumps of the groups being placed closer together, there would be more of contrasted colour brought at once under the eye, and larger spaces of turf would be secured near the museum border, and round the fine purple Beech (13), whilst a good opening would be made for the introduction of vases and statuary, of which, considering their grandeur, these gardens cannot be said to be rich at present, if we except the seahorse pool.

4. The ribbon-borders are a grand feature at Enville, and that not so much owing to the planting and the plants, though both were very good, but to their massive backgrounds of various-tinted green of Laurels, Hollies, Laurustinus, and Rhododendrons. The fine spikes of the Holly-hocks looked very noble against such backgrounds. The very best level ribbon-borders we ever saw, as proofs of cultural skill and unremitting care, were at Oulton Park, under the management of Mr. Wills, but they lacked the grandeur of the post-office ribbon-border at Enville, because they had no such background.

5. In looking at the ground plan one would be apt to suppose that the walks would be too numerous, and that several, as yellow or brown strings could be seen from almost any place; neither is the case. We hardly recollect seeing one walk from another, except at the points of junction. The very number seemed necessary to get to see the different objects comfortably. The intrusion of the sight of other walks is almost constantly prevented by the undulating character of the ground, the position of the masses of shrubs, and even by the size and rounded outline of the beds.

6. Whilst the masses of shrubs and the background of the ribbon-borders are densely planted, all single specimens of Conifers and others will have ample space not only to grow, but to show off their beauties.

7. We have incidentally alluded to the kindness and liberality with which the noble proprietors of these grounds open them two days in the week during the summer to the public. Entrance is obtained by ticket, procured readily at the hotel or from Mr. Craw, the tickets being chiefly a matter of form, but so arranged as to enable the manager easily to know the number of visitors that are present each day. Thousands of all ranks and classes use and appreciate the

boon, and with scarcely an exception the great myriads act thoroughly as if they felt their sense of right and honour appealed to. We have lately heard a good deal of the axiom, that "Property has its duties as well as its rights." It is characteristic of our times, that so many of our nobles and gentry go far beyond the stern demands of duty in the sympathy they manifest for all that will interest, amuse, instruct, and elevate their humbler brethren. The standing aloof in solitary dignity, the attempt to live for ourselves alone, will ever be found a mistake and a failure, whether tried by the peer in his palace or the peasant in his cottage. We have heard some would-be independent people sing until they were hoarse—

"I care for nobody, no, not I,
And nobody cares for me."

But the louder they sang the more did they confirm the impression that they did care, just as the schoolboy who has learned enough to make him superstitious, "whistles the loudest to keep his courage up," whilst shaking like an Aspen leaf at every wind rustling among the grave-stones at night, as he passes through the churchyard. No man, however much he may wish it, can stand alone uninfluenced or uninfluencing, or escape if he would the attendant responsibility. A great step in human progress would be gained were there a more general practical recognition of the fact, that one of the very best means of securing happiness for ourselves, is simply to be engaged in making others happy.

And, lastly, whilst such means as these are presented for the gratification of the inhabitants of the surrounding districts, the best interests of the villagers of Enville have not been neglected. The last place we visited was a very elegant school-house, and residence for the schoolmaster, erected by Lady Stamford, and presented by her ladyship as a free gift to the village. Before seeing the master, we had a walk through the garden, and found that he was as fond of the garden as ourselves, although the hares had tried hard to lessen his enthusiasm by nipping the points of his favourite fruit trees. We hope that by this time they are thoroughly excluded by a close fence or wire netting. Everything in the school, from the stained and varnished open roof, the maps and illustrations on the walls, the tables and forms, and the unique desk of the master, spoke not only of comfort, but elegance, and in this respect contrasted strongly with what we had lately been reading of the dirty, hacked, and whittled appearance of the forms and tables, and even what served as tutors' desks, at Eton. We are not in a position to say what effect such appearances of the untidy and the dismal may have on the young gentlemen who congregate there, but we do know that a dirty church or chapel, and a miserable-looking schoolroom, exert a deteriorating influence on the rising generation amongst us of the working classes. At Enville we can fancy many an urchin curiously scrutinising the wonderful rostrum of the teacher, with its many distinct boxes, and next to countless drawers, all so bright with their varnished handles, until he feels that everything approaching the untidy and the slovenly would be quite out of place. We are not disposed, without a proviso as to the kind of beauty, to join thoroughly in the proposition, "A thing of beauty is a joy for ever," but we do maintain that all beauty does exert a softening, refining, and elevating influence. We hope the villagers will sufficiently appreciate their advantages, as that will be the best compensation they can give for such kindness and liberality.

We take this opportunity of correcting a misprint which occurred in the third paragraph of page 376, in which the first bed in the third row is said to be edged with Lord Stamford Verbena, instead of the Geranium of that name.—R. F.

WORK FOR THE WEEK.

KITCHEN GARDEN.

WHEELING out manures, composts, earths, mud, &c., trenching, draining, making new walks, and repairing old ones, are amongst the principal operations at the present season in this department. Always make choice of suitable weather for performing each, with a view to cleanliness and good order. *Asparagus*, some of the earth may be removed from the surface of the beds, and its place supplied

with strong, rich, decomposed stable-manure, to which may be added, with good effect, a sprinkling of salt. The fine dry weather we have had lately has been particularly favourable for taking up Carrots, Parsnips, and Beet, and if not already done, let the ground they occupied be trenched; and where the soil is clay or strong loam, let it be ridged, that the frost and air may act on as large a surface of it as possible. If the ground is required for planting Potatoes, the ridges may be made 2 feet apart from the centre, and the Potatoes may be put 3 or 4 inches under the surface of the soil between the ridges, and the ridges will crumble down as frost approaches, and protect the tubers from its action. *Jerusalem Artichokes*, a bushel of them may now be taken up, and placed among some mould in any convenient corner, for use when frost renders it difficult to get them up in the open ground. The same applies to Horseradish. Onions, the ground intended for them next year to be trenched up, and some rich manure laid on the top, which must be well knocked about in dry frosty weather during winter. Peas, about the 20th of the month is by many considered quite soon enough to sow them, as also Broad Beans, to stand through the winter. Sea-kale, clear off the decayed leaves, and cover a portion with pots, to be ready for covering with leaves and fresh manure, or leaves alone if the other is not attainable. Ground may now be made ready for new plantations of this, Rhubarb, and Asparagus, and as these are what may be termed permanent crops, every care ought to be bestowed on the thorough preparation of the soil for them. The ground to be trenched 2½ feet deep, manured, pulverised, and drained, and where it is exhausted in some of its essential qualities—as nearly all old garden soil is—there ought to be an addition of new loam; for real success this is imperative. Clear away dead leaves from all growing crops, and fill up blanks as they occur.

FRUIT GARDEN.

Continue to prepare for fruit-tree planting by draining, trenching, and pulverising the soil, and after planting stake, tie securely, and mulch them in good time. Clear away all dead leaves from wall trees, and remove the green fruit from Figs. The established strong-growing fruit trees that are tardy in producing fruit should be root-pruned; but this must be performed according to circumstances, if the trees are planted too deep, or the soil has been raised above or about them since planting, by all means fork the roots out carefully, and plant them again on the surface, spreading out the roots judiciously, and then mulch them. If the trees to be operated on are planted high and dry, fork about them at a reasonable distance, and prune back the main or strongest roots as you find them. Raspberry plantations to be cleared of the dead canes and superfluous wood, the suckers taken off, and, where required, the strongest to be at once planted for succession.

FLOWER GARDEN.

To keep the walks, lawn, flower-beds, and borders clear of the fast-falling leaves, when all traces of the labour and attention of one day may be effaced by the next, will now require unremitting attention, if the garden is daily visited for amusement and fresh air, or if it is seen from the windows. Now, that the frost has transformed the gay and lively tenants of the garden into blackened spectres, it is advisable to remove them out of sight, and to fill up their places with bulbs or evergreens, as recommended last week. We have seen small branches of evergreens stuck all over the beds as "make-believes" that they were plants in pots. The difference to the eye of taste is as great as the difference between mock turtle soup and real turtle soup to the taste of an alderman. Flower-borders of a stiff and unkindly nature will be improved by an admixture of road sand, leaf mould, wood ashes, or any other light soil dug in, leaving the surface to be fully exposed to frosts, when it will be in a more pulverised and fine state for planting or sowing at the proper season. Many trees and shrubs that had been at first planted to produce an immediate effect, are too generally left to spoil each other. The reluctance to prune and thin shrubberies is particularly conspicuous in the gardens of amateurs, but by removing such trees or shrubs as are too near, and by giving more space to the more valuable varieties a more natural and delightful effect would be produced.

GREENHOUSE AND CONSERVATORY.

The frosty nights will render a recourse to fires absolutely

necessary. Regularly remove all dead leaves and prevent the spread of moss in any situation. Creepers should be closely tied that they may interfere as little as possible with the fall of light on the houses. Give timely attention to providing a succession of bloom with which to keep the conservatory gay. Be careful not to let plants in bloom suffer for the want of water, giving weak clear manure water to Chrysanthemums, Salvias, Camellias, &c. Damp and mildew are the great enemies to be guarded against in the greenhouse, and these must be sharply looked after, especially in the case of plants that have not well ripened their growth, and are in rather a soft state. If such things as Geraniums, Cinerarias, and herbaceous Calceolarias must be wintered in the same house with Heaths and other hardwooded plants they should be kept as much as possible by themselves, as they will require a somewhat closer temperature than hardwooded plants.

PITS AND FRAMES.

Let straw shutters or whatever covering it may be intended to use here be prepared without delay. Expose the stock here freely to air on every favourable opportunity, so as to check growth and get the wood firm, in which state the plants will be less liable to suffer from the confinement which may soon be necessary than if kept close and coddled with too much warmth and moisture now. Very little water will be required at the root, but look over the stock every few days, withholding water until it is absolutely necessary, and then giving a moderate soaking, which is the only safe method of giving water at this season. If green fly makes its appearance on any of the softwooded things apply tobacco smoke at once.—W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

SEVERAL sharp frosts have made us look about us, as all our bedding stuff was in old pits and frames. However, as yet we have escaped unhurt.

Cauliflowers.—Took up some dozens of Cauliflower fit for use, and placed them in a shed, standing them upright, where we can throw a little dry litter over them if necessary. Took up a lot more, which would grow a little without detriment to their appearance, and planted them under the thatched shed in a part of the first Mushroom-bed that is now about over, and where also extra protection can be given if required; and moved a nice lot of young plants just beginning to show their heads, moving them with good balls, and planting them in an earth pit, to be covered with old sashes, and extra litter over that when necessary. The earth was very dry, but we merely watered round the balls after firming the soil about them, and left the surface dry, which will be a better preservative against frost than a moist state of the soil at the surface. The heads were also, by slanting the plants, well covered to their bottoms with the dry soil, which as well as the leaves would protect them. We have generally had a good supply from such late Cauliflowers so treated, if we can manage to keep mice from them in severe weather. Of course both rats and mice can easier penetrate into earth pits than those formed of brick, though they can also get into the latter when a light is left open for air. When, from severe weather, such crops must be covered up night and day for a week or two, it is a good plan to shut a cat in during part of a day, as it is very annoying on uncovering to find the best heads all nibbled. Where no such conveniences exist, but there is a good shed or back house from which frost may be excluded, and the Cauliflower-heads are nearly as large as they will be wanted, all the leaves may be removed, except the few short ones close to the head, and the stems cut over some 15 inches or so in length, and then fastened upright in damp sandy loam, just near enough for the heads to be free of each other. The heads thrown into sweet cold water for a few hours before using them will scarcely be distinguished from those cut from free-growing plants. For this plan the heads must be firm and wanting a little of their full growth, as if large they will open and spread out, and thus lose their compactness. Even in that case they make a nice dish when cut up into little pieces, and look like the little heads from white Sprouting Broccoli.

Looked over the Cauliflower plants in hand-lights. By some mistake we have too many. We wanted nine in a light, to be thinned in spring to four or five, but there are more we find, but they may as well stand now. These, as they have taken hold, we shall keep as hardy as possible until March, and will only cover the glasses after the plants have been frosted slightly. Potted a few of the forwardest plants left into 60-sized pots, to be kept protected during the winter, and shifted into larger pots as they grow. Pricked out a lot more of young plants in light, sandy soil, with a little sand on the top, so as to protect them with old sashes when necessary, as we find that in our cold place this is better than pricking-out by the side of a wall. These will be planted out finally about March, to succeed those under hand-lights.

Lettuces.—Took up a lot of the forwardest, and placed them in orchard-house, watering at the root as we went on, and leaving the dry soil as above on the surface. Hoed those that can be protected out of doors, and the younger ones intended to stand the winter, having great faith in a fresh-stirred surface for keeping frost in its severity from the roots.

Endives.—Covered up a part of a bed with dry tree leaves and a little litter, to prevent the leaves blowing about. Took up a lot of succession for orchard-house, and also for earth pits. Where none of these conveniences exist, a good plan is to tie up rather loosely, and then earth-up with dry earth, and place a board or a little litter on the top in severe or in very wet weather. Fine large green heads taken up now, with a little earth attached, will grow slowly and blanch at the same time, if packed rather closely in a dark cellar, or in any place where little light and no frost can reach them. These will keep good a long time, and eat very crisp and sweet. We have tried these, Cauliflowers, &c., in the dark passage of an old-fashioned ice-house, but though there was no fault with the look, the flavour was in general very insipid. So far as our opinion goes, everything suffers in flavour that has been long in an ice-house, or the chambers adjoining.

Chicory and Dandelion roots may now be taken up and stored ready to be used as salads when desired, by being forwarded in a dark place, or forced in a warm place, all the growth being made in the dark. To have these good, the heads should not be more than 6 inches in length, if an inch or two less they will be better still. When the leaves are drawn by heat to 9 or 12 inches in length, there is little more substance in them than thin paper. For a salad all these things look nice, but for flavour commend us to a crisp Lettuce. We believe that Endive is often used, because it looks more ornamental in the salad bowl, but it lacks at the best of times the sweetness and the crispness of the Lettuce.

Mustard and Cress, where in regular demand, should now be sown once a-week. For small families nothing is better than shallow narrow wooden boxes—say 3 inches deep, and 3 or 4 inches wide. Small pots may also be conveniently used, just sowing a pot after the produce is cut over. Sandy leaf mould is about the best soil to grow it in, the surface made level, the seeds then sprinkled over it rather thickly, then patted level, well watered, and covered with a paper or cloth until the seed-leaves appear, when they must have light to make them green. It is not advisable to cover the seeds with sand or earth of any kind, as when thus covered there is a good deal of trouble in cleaning the crop. Done as above stated the crops may be cut clean over, and sent pretty well as cut to table.

Cabbages.—If the frost threaten to be severe, will take up or cut over heads well swelled of the common, and the Red not used; meantime have forked the ground among the young plants intended for the next spring's first supply. The grub now seems to let us alone. We think its leaving was helped by sprinkling a little tar between the rows.

Dwarf Kidney Beans.—Moved a number of pots, when the plants were in bloom and setting their pods, from a cold pit to where they could get some fire heat in a pit, as we want them in a fortnight. Even Scarlet Runners out of doors, though protected, are pretty well done for now.

Cucumbers.—Gave a little more heat to these, now bearing freely. Will hardly keep them over the winter as we used to do, as they are little in demand now, except on some

particular occasions, and they cannot be kept healthy without more heat than it has been deemed advisable to spend upon them.* Did we mean to keep these plants on, we must not let above one fruit in three swell to its size. To do good and produce freely after Christmas, they must yield but sparingly now.

Mushrooms.—Covered the last little bit in the thatched open shed, as we want a lot shortly, and ere long our first bed in the Mushroom-house will be in. Put in more stuff for another bed. Our second piece in the shed is still producing freely. We find that the manure we are now using for a fresh bed is rather fresh and moist, but instead of waiting for it to dry, we mix a lot of road scrapings and road parings which are very dry with it, and it saves time and labour, and the spawn runs in the mixture beautifully. We have put a few tree leaves round our fresh spawn heap, as it was not spawning quick enough for us. We also damped the bricks a little, as we found they were rather dry. Whether in a spawn-brick or in a bed, the spawn runs most freely and healthily when the material is in a medium state, and neither wet nor dry.

Potatoes.—Looked over seed Potatoes and others. We have seen no appearance of the disease this season in the garden produce, though they were a very heavy crop. They were taken up early to put other crops in. This disease, however, is as puzzling to us as ever. In a field where, we were told, Potatoes were never grown before, where little, if any, manure was used, and where, owing to the drought, the crop was rather scanty and the specimens undersized, but quite sound when taken up, now they are going fast—hardly a tuber but is spotted when closely examined; and this is the case with late kinds, as Flukes and Regents, as well as with earlier kinds. At no great distance—say a mile—another field, in similar soil, and treated in much the same way, with the exception of being pretty fairly manured, produced a fair crop, and as yet no disease has appeared. We really begin to think that our wisdom has as yet done little in averting the disease, and that, in fact, philosophy knows but little as to what will bring it and what will keep it away.

Beet, Carrots, &c.—Took up those that were left, that the first, especially, may escape frost, and will pack up at the first opportunity, finding great lack of room for many of these purposes. A shed with strong rough benches is capital for all such purposes. We think we told how, for several seasons, the birds worried us with Beet, cutting off the seedlings as soon as they appeared. Those just taken up were transplanted, and, to beat the birds, we intend sowing under protection in future. Not a plant missed, and the size is liked better than when the roots are very large. We are told that very large thick roots are apt to have a hard core when boiled. These roots should be taken up with care, and the leaves taken off without cutting, as the colour is better when no wound is given to the root.

Celery.—To keep this all nice the siftings from our coal ashes have been spread over the beds, and a little stubble stuffed in among the plants, leaving the tops free, which will only be covered in the case of severe frost. For this purpose evergreen boughs are very good, and if very severe weather come a little litter may be placed over the boughs. This keeps the weight of the litter from the leaves of the Celery.

Ice in houses and heaps should now be used sparingly, and looked after carefully in all cases where water is scarce. Ice is more generally obtained for stores in November and December than in other months; but in this neighbourhood, had we ever such a severe frost, there would be no ice to be had, as we have no water to freeze. With so many wells becoming dry, a heavy continuous rain, or even snow, for a few days would be a great general blessing. The prevalence of scarletina and other fevers we believe to be much owing to the scarcity of water and its attendant evils.

FRUIT GARDEN.

Much the same as in last and previous weeks. Washed, cleaned, and painted the trees in the front of the Peach-house. Scraped off the surface soil for an inch in depth, forked up slightly, watered where dry, surfaced with a little cowdung, and then a slight covering of fresh dry earth, and then

cramped every available spot with bedding Geraniums, &c., in boxes. This gave us room in the earth pits for the Cauliflowers, &c. Removed all the leaves and fruit in Fig-house, watered to prevent over-dryness, and fresh surfaced with a little soil. We will fill this house for the winter with bedding plants, &c. Before the frost became severe covered the Vine-border with about a foot of leaves, and a little litter over them. We should have liked them to be a little more moist, but we did not wish them to become cold, and a little litter will keep heat in, and thus the border be kept in a comfortable state to be started when desirable. We have more faith in this system than in throwing heat down into a border. Unfortunately our roots are all outside. This covering was especially necessary for the late house. Before covering we put the smallest surfacing of cowdung over the border, and on that a thin film of gas tar, as it is just possible we may yet have more water from the heavens than would be desirable for such a border.

Wood Covers.—A gentleman asked us if we considered gas tar a better plan than a good tarpaulin or wooden shutters, or frames of asphalt, for excluding extra wet and cold too; and we replied, "Decidedly not." "Why don't you have them, then?" Ay, why, indeed! Some amateurs, and the proprietors of small beautiful gardens, have an idea that the gardeners to ladies or gentlemen can just have what they like. A little practical experience in the generality of such gardens would soon tell them a different tale, and show them what makeshifts must be resorted to, in order that no extra bill may make its appearance. It matters not, though a proposed plan may be most economical, a great saving even in the end, it must not be more than dreamed about, if it involves an extra present outlay. Our own observation would lead us to say, that as a rule, there is more rigid economy, and more care taken to make the most of everything in gentlemen's gardens in general, than even in commercial establishments. The men who put their capital in such establishments, know the economy of having materials suitable for the destined purpose at once, instead of wasting their resources in doing, and ever doing, and never finished doing with makeshifts for the time. We once had a good deal to do with a carpenter, who as a regular Jack-of-all-trades, was a very clever fellow, and who partly from his own peculiar idiosyncrasy, and partly from the policy of the firm he long served faithfully, was in the habit of saying, as he finished every little job, "Oh! it will do for the present," and so it just did, for the present of to-day generally required a repeated *present* in a very short time afterwards. We allude to this more prominently just now, because of such an inquiry as the following—"I have received the following advice how to act from Mr. G., but then I perceive he does not follow out the plan he recommends. Just give me your opinion." Ah! were we poor gardeners like the lawyers, we would not so often be asked for our opinions. Were they paid for they might be deemed more valuable. However, in the case referred to, and in scores of others, the opinion and advice of our brother were quite correct, though he was not able to practise what in this case he preached. A man who is an enthusiast in self love, may err in recommending his own practice, but it is rare that an intelligent man will recommend a course different to that he himself follows, unless he has strong grounds and convictions of the superior suitability of what he thus recommends. For ourselves we have had many letters of thanks for recommending wooden shutters, covers, &c., for protection, and yet for many years we never have had one. That is no reason why in the end such covers are not superior to all others, as they undoubtedly are.

ORNAMENTAL DEPARTMENT.

Much the same as in previous weeks. We intended putting in more Calceolaria cuttings. As this season we are rather behind with extra work of various kinds it was fortunate we had a lot taken up and placed under cover, or we should have suffered, as those out of doors are too much injured. In the beginning of last week, the 7th inst., we had a lot of Calceolarias sent us—great plants taken out of the beds—and they seemed all right before we began to strip them off for cuttings, when we found every shoot so injured as to be of no use. They had been caught in the frost of Saturday and Sunday the 5th and 6th. We mention

this also for another purpose, and that is the next to uselessness of sending such large root plants to a distance. They will be valuable chiefly for the slips that could be taken from them, and these would have come more safely in small parcels in paper. We have also a lot of old Scarlet Geraniums by the sides of sheds, as well as inside; and as we cannot get at them yet we have covered them over with dry litter until we can do so; then we will strip and treat many of them as we did last season, making faggots of them in large pots or boxes, or placing them thickly in a cold pit when we can make room. Tree leaves will soon be down now.—R. F.

COVENT GARDEN MARKET.—NOVEMBER 12.

The supply both of fruit and vegetables is well kept up. Of the former, hothouse Grapes are in better demand; and the supply of Pines has improved. A few Dutch Peaches are still to be had. Walcheren Broccoli, Brussels Sprouts, Savoy, and other Greens are abundant and good; and of Potatoes large quantities have arrived both coastwise and by rail.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples.....	½	sieve	1	0	2	0			
Apricots.....	do.		0	0	0	0			
Cherries.....	lb.		0	0	0	0			
Chestnuts.....	bush.	14	0	30	0				
Currants, Red.....	½ sieve	0	0	0	0				
Black.....	do.	0	0	0	0				
Figs.....	do.	0	0	0	0				
Filberts & Nuts 100 lbs.	60	0	80	0					
Cobs.....	do.	70	0	80	0				
Gooseberries.....	½ sieve	0	0	0	0				
Grapes, Hamburghs lb.	1	6	8	0					
Muscats.....	do.	3	0	7	0				
Lemons.....	100	5	0	12	0				
Melons.....	each	1	6	0	0				
Mulberries.....	punnet	0	0	0	0				
Nectarines.....	do.	0	0	0	0				
Oranges.....	100	10	0	14	0				
Peaches.....	do.	4	0	10	0				
Pears (kitchen).....	bush.	5	0	10	0				
dessert.....	do.	1	0	8	0				
Pine Apples.....	lb.	6	0	9	0				
Plums.....	½ sieve	2	0	7	0				
Pomegranates.....	each	0	4	0	6				
Quinces.....	½ sieve	1	6	8	0				
Raspberries.....	lb.	0	0	0	0				
Walnuts.....	bush.	14	0	20	0				

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes.....	each	0	0	0	0				
Asparagus.....	bundle	0	0	0	0				
Beans Broad.....	½ sieve	0	0	0	0				
Kidney.....	½ sieve	0	0	0	0				
Beet, Red.....	do.	1	0	3	0				
Broccoli.....	bundle	1	0	3	0				
Brussels Sprouts.....	½ sieve	2	6	3	0				
Cabbage.....	do.	1	0	2	0				
Capecums.....	100	1	0	2	0				
Carrots.....	bunch	0	6	0	8				
Cauliflower.....	do.	4	0	4	0				
Celery.....	bundle	1	0	2	0				
Cucumbers.....	each	0	6	1	0				
pickling.....	do.	0	0	0	0				
Endive.....	score	2	6	3	0				
Fennel.....	bunch	0	3	0	0				
Garlic and Shallots, lb.	0	8	0	0					
Herbs.....	bunch	0	3	0	0				
Horseradish.....	bundle	2	6	5	0				
Leeks.....	bunch	0	2	0	3				
Lettuce.....	score	2	0	4	0				
Mushrooms.....	pottle	1	6	2	6				
Must. & Cress, punnet	0	2	0	0					
Onions.....	bushel	3	0	4	6				
pickling.....	quart	0	6	0	8				
Parsley.....	dox. bunches	4	0	6	0				
Parsnips.....	do.	0	9	1	0				
Peas.....	quart	0	0	0	0				
Potatoes.....	bushel	2	6	4	0				
Radishes.....	dox. bunches	0	9	1	0				
Savoy.....	do.	1	0	2	6				
Sea-kale.....	basket	3	6	0	0				
Spinach.....	score	3	0	5	0				
Tomatoes.....	½ sieve	2	0	4	0				
Turnips.....	bunch	0	3	0	6				
Vegetable Marrows.....	do.	0	0	0	0				

TO CORRESPONDENTS.

•• We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London. E.C.

N.B.—Many questions must remain unanswered until next week.

GROWING FRUIT FOR SALE (Profit).—Our Covent Garden Market report gives the retail prices. It is quite impossible to forecast prices, they are so dependent on seasons and other contingencies which influence the supply. Call on Messrs. Webber, in Covent Garden, and ask Mr. Taylor to give you some hints. Hamilton's book on Pine culture was published by Mr. Masters, Aldersgate Street.

OAK LEAVES (An Irish Subscriber).—The numerous scale-like excrescences are a parasitical fungus; the white ball was crushed, but probably was a gall caused by the puncture of an insect, some species of Cynips.

PLANTING TERRACES (M. G.).—From your description we do not quite understand the position of the terraces. Neither of your figures is symmetrical as a whole. The repetition on the other side of walk will give more balance. The terrace on gravel and Box will look very well, but there will be a degree of sameness from having a white or light colour to all the beds, except 17. This, however, in some critics' estimation would be an advantage. We had some square gardens of Verbenas all edged with Ceranium, which looked very well, and will look well in winter. When tired of that arrangement, you might in another year edge 7 with white, 9 and 10 with purple, and 13 and 14 with blue, and the 17 might have a white edging. As to terrace garden—Does Golden Mint keep colour with you? With us it goes back, and so does the Golden Ground Ivy. In 9 and 10, we think you had better omit the Heliotropes, as they will not match with the Tropaeolum in habit; 17 and 18, Cloth of Gold; Heliotropes, purple, kept low; and Ceranium. We would, however, prefer dark Heliotropes for centre, and Cloth of Gold for edging; then 21 as now, 13 and 14, mix the Alyssum or Ceranium with a little Lobelia.

GRAY VELVET-LEAVED PLANT—TROPÆOLUM ELEGANS CULTURE (E. G. H.).—The plant is Gnaphalium lanatum. It does well for edging, and may be permitted to grow 18 inches in height or more, or be clipped to a few inches in height. It is not hardy, as most likely the recent frost will tell you. It is easily propagated by cuttings. Round large beds and, therefore, a sort of hedge, it will bloom and produce its rather sweet everlasting flowers. The Tropaeolum elegans is best kept on by cuttings, it should not have much less than 45° in winter to keep it healthy. It may be planted out the last week of May. To produce abundant bloom the soil should be poor, or vigour arrested by pulling off the strongest foliage. Tom Thumb Yellow and Tom Thumb Scarlet are yet as good as any. Fireball is brighter than Tom Thumb. In strong soil you must disleaf. By this simple process we can make any kind a mass of flowers.

INTERMEDIATE ORCHIDS FOR PLANT CASE (An Amateur).—You do not state the width of the case; but for one 7 feet long, 3 feet in height, and heated by a tank beneath, we would choose the following:—Cypripedium insigne and venustum, Odontoglossum grande, Dendrobium speciosum and grande, Neottia plantaginifolia, Bletia hyacinthina, Oncidium leucociliatum, at least for a commencement. From 50° at night would be ample for these if it suited your Ferns, with a rise of from 5° to 10° during the day. Less would do. But you can easily add or diminish by using a cloth cover at night for your case in severe weather, and putting hot water in your tank the last thing at night.

PROTECTING A FIG TREE (An Old Subscriber).—The Fig having lost its leaves, unvail the branches from the wall, and tie them together, so as to be conveniently covered with straw. The large Figs may be removed, but the small ones must be carefully retained, and the branches, having been brought close together, should be tied with strong mat, and covered with straw to the thickness of about 6 inches, fastening it with tarred string tightly round the Fig-shoots, rather in front of them, and down to the root. This will be sufficient to protect them from the rigours of an ordinary winter. The straw should be taken off in May, covering the tree then with a mat or two on frosty nights, until well hardened. They should be fastened to the wall again by the time they begin to grow.

VINE PLANTING (Wm. Holland).—We consider the first half of March would be a very suitable time to plant a fresh Vine in an outside border. Prune the Vines of which the leaves are now falling by the middle of December, or about a fortnight after the leaves are all fallen. The Peach trees, to afford fruit in July, should be placed in the vinery by the 1st of March. "The Vine Manual," price 2s. 6d., will be published this week, and it contains all that is necessary to know on Vine culture.

PRESERVING ACHIMENES ROOTS—WINTERING LILIUMS (Elizabeth).—Keep them in the pots in a dry part of the greenhouse. If placed on the floor under the stage, free from drip from the plants above, they could not have a more suitable position. Liliun lancifolium may be wintered in a cold frame, plunged to the rim in coal ashes, with a slight protection of mats in very severe weather. The Amaryllis, we presume a greenhouse kind, should be kept in the pot in a dry, light, airy part of that structure, without any water until it begins to grow in spring. Liliun giganteum, also L. lancifolium, should not be allowed to become dust dry, but, nevertheless, be kept rather dry in the pots in any part of the greenhouse, except under stages and on flues. If the pots are on a damp floor they will need very little, if any, water during the winter.

VARIOUS SHRUBS (H. N. E.).—All the shrubs named require the protection of a cool greenhouse. They will not bear exposure, so far as we know, in any part of the kingdom, except in very favourable localities, as those from which you had them.

ALYSSUM SAXATILE SEEDLINGS—VIRGINIAN STOCK TRANSPLANTING (A Subscriber).—The seedlings sown last June ought to bloom next April; but as they are small, and probably have not been pricked out, they very likely will not flower until the year following. The Virginian Stock may be transplanted to the beds now, taking care to remove and plant with a ball of earth to the roots. It must be done in mild weather, and is best deferred, if the soil be wet and heavy, until March. Lobelia speciosa is a half-hardy plant, requiring the protection of a cool greenhouse; it will not, therefore, live out of doors all the winter. The Roses in pots may remain out of doors, plunged to the rim in coal ashes, in a sheltered situation.

POTTING STRAWBERRIES FOR FORCING—CRINUMS NOT BLOOMING—DATING FUCHSIAS (H. E.).—Strawberries for forcing ought to have been potted some months ago. The grand secret in growing Strawberries in pots is to have the plants well established before autumn, the pots full of roots, and the crowns plump and well ripened. As you mention potted now, we presume the plants are, as yet, in the open garden, and not in pots; if so, take up those with the most prominent crowns, and not more than a year, or at most two years old, by thrusting a trowel down on all sides about 3 inches from the centre, and pot such, with the ball entire, in seven-inch pots, using rich loam, and pressing the soil firmly around them. Water and place in a cold frame. If you have materials, as leaves, or litter, with which to make a bed about 3 feet thick, do it by all means, and half plunge the pots, but keep the lights off. This warmth to the roots will cause the plants to fill the pots with roots, and the heat being gone in a short time, if the lights are put on during frosty and wet weather, the plants will ripen their crowns; air, however, must be freely admitted when the weather is mild. In this case the plants, after being cleared of their bad leaves, may be placed on a shelf about 15 inches from the glass, in a cool vinery, by the beginning of March. Failing the frame and materials to raise a little warmth, place the potted plants in a sunny sheltered situation, close to a south wall or fence, and have the shelf fixed forthwith, then place the Strawberries thereon, giving, until March, no more water than is sufficient to prevent the latter flagging, and air on all favourable occasions. Such plants very frequently give a fair crop, but not equal to those reared for the purpose. The Crinums may be induced to bloom by planting them in a sunnier and warmer situation in soil not liable to become wet during the winter. They do not bloom because the growths are not perfected. There is such a thing as a double Cineraria, but it, with many of its predecessors, are not worth much. As for the Fuchsias, bloom them if you will up to Christmas, and then keep them dry, so as to afford a season of rest. If they are young plants they must be kept gently growing over the winter.

PROTECTING SHRUBS (A Very Old Subscriber).—The shrubs named would not be injured by any frosts we have had this season, the injury to the leaders being probably due to the recent removal. You may place a mat round them in severe weather, removing it in mild periods, but such protection is of little avail, and does quite as much harm as good.

SEED OF COMBRALIA (W. R.).—We do not know such a genus, nor a plant by that name.

VINES FROM EYES—FIES FOR BACK WALL OF VINEY (A Constant Subscriber).—Obtaining from eyes put in in February canes as thick as the little finger by autumn, is no difficult matter, and such are frequently produced. The eyes are inserted about half an inch deep, singly, in small pots of light, sandy, turfy loam, slightly watered, and plunged in a bottom heat of from 85° to 90°, with a top heat of from 65° to 85°, and a moist atmosphere. The eyes soon start into growth, and, if kept near the glass, are not drawn up weak. To insure a sturdy and well-matured growth, a free circulation of air is kept up, care being taken to avoid cold draughts. When the pots are filled with roots, or rather when these present themselves at the sides, the young plants are potted in seven-inch pots, using turfy soil of the same temperature as the house. This will be necessary in March or April. They are again plunged in a hotbed of 80° or 85°, and have a top heat of 65° by night, with a rise of 15° or 20° with sun and air, the latter being given at 78°, and taken off when the thermometer sinks to 80°. The Vines are gently bedewed overhead through a fine syringe, night and morning, with soft water of the same temperature as the house. By June the Vines will be strong, and need potting again. If it is desired to insure strong canes that will fruit in the following season, select the strongest, and have a 12 or 13-inch pot drained perfectly by a large crock over the hole or holes, a couple of inches of smaller crocks above it, and then 1 or 1½ inch of half-inch bones mixed with a little turfy loam. Fill the pot with soil to the required depth for the Vine, so that the latter may be placed an inch or two deeper than before, filling in round the ball with soil from turves a year old, and leaving half an inch for watering. Place in the hotbed, and train the cane near the glass, if possible about 1 foot from it, keeping up the same heat and moisture as before. Laterals will present themselves at every leaf; these should be allowed to grow, and the waterings being copious, and every alternate one liquid manure, the Vines will grow at a rapid rate, and soon make a cane 20 feet long. This not being desired, stop them at 8, 9, or 10 feet, according to their strength, and this will cause the cane to thicken, the laterals being stopped at the sixth leaf. More laterals will take their rise from the stopped laterals, but the cane will now be beginning to assume a russet hue. The quantity of water is now to be lessened, more air given, and the laterals by degrees brought nearer the stem, until they are finally removed by the time the wood becomes brown and hard. They are then cut clean away, in order to admit as much light as possible to the wood, in order to ripen it effectually, and the house is kept dry, and no water given, except to prevent the leaves falling prematurely. By this plan we have canes as thick as a walking-stick, and have fruit on them in the following April—six or eight bunches of about a pound weight on each. Our "Vine Manual" contains directions for raising Vines from eyes to fruit the following season. The Brown Turkey is the best of Figs, and that you seem to have under the synonyme of Lee's Perpetual. "Brown's Perpetual" is probably the Brown Turkey. Rich dressings of manure (cowdung is best), or watering with manure water, will enable you to improve their size. The Singleton, or White Ischia, is a good Fig, but a bad bearer.

ASPARAGUS-BED MAKING (M. D. Pontefract).—Drain the ground effectually to a depth of 4 feet. Make the bed now by digging out the soil 6 feet wide for a bed 4 feet wide, and 3 feet deep; place a layer of dung 3 inches thick at the bottom, which may be partially decomposed stable manure, and then a layer of soil; fork this up and thoroughly mix it with the dung beneath, and then place another layer of dung and soil upon it, forking as before, and so on, until the bed is brought to the level of the surrounding ground; then put on a layer of dung, with an additional 3 inches of leaf mould, if you have it, and 6 inches of soil over that. Fork over the bed, so as to mix the dung, leaf mould, and soil together, and leave rather rough, so that the frost may do its work during the winter. In March fork over the bed again, and in the last week in that month, or first of April, plant three rows of Giant, two-year-old plants, at 1 foot apart.

GUANO WATER FOR EVERGREENS (A Constant Reader).—Weak guano water will not injure the shrubs named if it be applied when they are growing and stand in need of water, but it should only be given at that time. It will do no good at other times, though it may not prove injurious. The application of it to Geraniums successfully does not imply that it may be given to all plants indiscriminately.

WALL FRUIT TREES FOR THE MIDLAND COUNTIES (T. S.).—You will have room for ten trees, which should be, *Pears*—Marie Louise, Louise Bonne of Jersey, Winter Nells, and Beurré de Rance. *Cherries*.—May Duke, Elton, and Florence. *Plums*.—Green Gage, Purple Gage, and Coe's Golden Drop.

PLANTS AND VINES UNDER OUR ROOF (A. Z.).—A detail of your experience will be very acceptable. Your queries shall be answered next week.

INSECT ON FERN (I. S.).—The insect on your *Dicksonia antarctica* is the common brown scale. Dip the plant into a strong solution of starch, let it dry on, and remain for a week, and then wash off by syringing.

BRAWNER FOR NEW ASPARAGUS-BEDS (A Five-years Subscriber).—We have used seaweed with great success, not only in making Asparagus-beds, but as a mulching during winter, removing it in March. Your mode of making the beds is good; and, as you have little manure to spare for the purpose, a foot thick of fresh seaweed will not be too much, mixing it with the soil equally from top to bottom, but keeping the hotbed manure nearer the surface, still mixing it well with the soil to at least a depth of 18 inches. You may bring the soil at the bottom of the trench to the top, which is what we presume you mean by bringing the loam to the surface, providing it is not heavy. The crowns of the plants should be covered with 2 or 3 inches of soil at the time of planting. Your one-year-old plants are good, but they will be longer before they come into bearing than if two or three-year-old plants were employed; but the certainty of growth will be increased, and the produce better, by planting young plants rather than those a year or two older.

NAMES OF FRUIT (J. P., A Young Gardener and Subscriber).—Your Apples and Pears were named in our Number of November 1st, page 360, under the initials, J. P. (*J. C. Wheeler*).—1, Beurré Châtaignier; 2, Uvedale's St. Germain; 3, a cross with the Siberian Crab, very pretty; 4, *Fyrus trilobata*. (*Adiantum Inguirer*).—2, Fondante d'Automne; 3, Glou Morceau. (*Charles Elton*).—Your Apple is Court-Pendu-Flat. There is no work on Apple-gathering, but you will find such instruction in all good gardening books. (*Albert*).—1, Bishop's Thumb; 2, Autumn Pearmain; 4, Parry's Pearmain; 5, Franklin's Golden Pippin. Number omitted were not recognised. (*Old Subscriber*).—1, Passe Colmar; 2, Gansel's Bergamot. (*P. Lang*).—

Your Pears are—1, Croft Castle; 2, Crasanne; 3, Belle de Noÿ; 4, Crasanne d'Hiver; 5, Vicar of Winkfield; 7, Ne Plus Meuris; 8, Spanish Bon Chrétien; 9, Belleme d'Hiver; 10, Verulam. (*G. Wadsworth*).—*Pears*.—1, Vicar of Winkfield; 2, Beurré Diel; 3, Easter Beurré; 4, Glou Morceau; 5, Beurré de Rance; 6, Beurré Diel. *Apples*.—2, Beauty of Kent; 3, Lamb Abbey Pearmain; 4, Winter Greening; 5, Hawthornden. (*Japonica*).—*Pears*.—1, Gendeshelm; 2, Fondante d'Automne. *Apples*.—1, Wormsley Pippin; 2, Reine des Dées; 4, Adams' Pearmain; 5, Court-Pendu-Flat; 6, Winter Greening; 8, Dumelow's Seedling; 11, Dutch Mignonne; 12, Hawthornden. (*J. L.*).—1, Dutch Mignonne; 2, Marquise Pippin; 4, Loan's Pearmain. (*B. D.*).—2, Count of Wick; 3, Pomme Violette; 4, Hawthornden; 5, Royal Pearmain. (*E. S.*).—2, Napoëon; 3, Beurré de Rance.

NAMES OF PLANTS (F. W. Bleasford).—Your Fern is *Cyrtomium falcatum*. (*A. L. B.*).—Your Ferns are—1 and 2, *Pteris tremula*; 3, *Phlebodium aureum*. (*Filices*).—1, *Lastrea Filix-mas*; 2, *Athyrium Filix-foemina*; 3, *Lastrea dilatata*; 4, *Nephrodium molle*; 5 and 7, *Asplenium ebennum*; 6, *Cystopteris fragilis*. These are, probably, the correct names, but no one can be certain from such scraps of fronds. (*A. McKelvie*).—A capital criste form of *Cystopteris fragilis*, somewhat approaching to regia. (*M. D.*).—We are still of opinion that your plant is *Salvia Grahami*. It certainly is the plant known by that name in gardens, and, as far as we can see, only differs from the wild specimens, with which we have again compared it, in being more robust in habit; but that is no more than might be expected in a garden plant, particularly in one upon which the hybridiser has been at work. Are you quite sure that the plant you formerly had was correctly named? (*Annie*).—1, *Bupleurum fruticosum*; 2, *Ruscus racemosus*. (*J. H.*)—*Tabernaemontana coronaria*. (*S. A.*).—Probably *A. monanthemum*, but perhaps one of the allied Mexican species, as *leptophyllum*. There is not enough to decide by. The other is *Campyloneuron decurrens*. (*A. Tenmonths Subscriber*).—*Phlebodium aureum*. (*W. R.*).—1, *Nephrolapis tuberosa*; 2, *Anemia flexuosa*.

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

BRAHMA POOTRAS.

It is said there are people who honestly disbelieve that Napoleon Buonaparte ever existed; who think Waterloo a sort of historical fiction. On the other hand, it is said people repeat falsehoods till they believe them true. It is said George IV. related a charge at Waterloo till he fairly believed he commanded and led it in person. It is hard to know how to describe or to classify this hallucination. It may exist with the strictest veracity, and the persons may be satisfied they are telling truth, while they are, in sober earnest, guilty of that which to every one else is a palpable falsehood, without any foundation whatever.

There are others who will not believe a thing after it has proved itself. The result may be plain as the sun at noon; but it will not be believed, or it will be tortured and twisted till it looks or sounds difficult. Henry V. of France, as some call him, the Duke de Bordeaux as others call him, had a public reception at Frohsdorf for those of his faithful nobles who chose to undertake the pilgrimage from France to that place. We should imagine the old marquises and the "preux chevaliers," dating in unbroken line from the Crusades, the real "sang azur" for generations; grand old fellows—we do not believe many young ones went—but rather fussy, and sticklers for etiquette. The dear Prince lived as usual, a full allowance of meals, and very little walking. When he was at table the pilgrims were allowed to circulate through the apartment. When he walked they followed, and admired him at a distance. Fancy a party of four, all wearing the cross of St. Louis, all mounting the white cockade: gentlemen to the backbone—two old, two middle-aged. It is known the Prince is somewhat lame, and, though painstaking conceals it at times, at others it is very perceptible. Fancy him walking along a gravel path forty yards ahead of the four pilgrims. Every now and then, when the plan of the gardens permitted it, they cut across or ran round in order to be able to see him nearer, and probably to be recognised. On one of these occasions, after he had passed, the two fine, tall, old men stood watching him. All at once there was an exclamation from one of them. "Ah!" he cried, "our dear Prince has one leg shorter than the other." "Shame," said his companion; "it is impossible—our Prince cannot be lame." "But see, he limps." "Yes," shouted the other, "that is because one leg is longer than the other, not shorter!" "But you must see—" "No I won't see, and I can't see; he may have a longer leg, he cannot have a shorter!" and the two old friends parted in dudgeon.

Very ridiculous, is it not? Well, then, how about the Brahmas? In entering on the question we address ourselves to two classes. We will tell "W. H. B." that which we believe to be true, and have tried. When we have done

that, we fancy the infidels "in re Brahmas" will be "handsomely whipped," and "knocked into a cocked hat."

Manufactured breeds are good only for a time, and require to be constantly replenished from the original stock. Let the breeders of the beautiful Sebright Bantams speak. How long will their pets retain the perfect comb, the faultless tail, the accurate lacing? All the points will disappear one by one, and, after three or four seasons, the lovely little bird will be a common black and yellow-blotched bird, with sickle tail, and very likely a cup comb. It is notorious to all breeders that cross breeds (and manufactured birds are nothing else), not only cannot be depended upon, but they throw back, and every now and then produce an apparently pure bird of a very different breed from their own. While this is a proof of mixed parentage, if a breed will go on for years reproducing itself without even an occasional sport, it affords good evidence of purity and distinctness.

Things are now tolerably well settled in the poultry world. Some do not know the difficulties there were in its early days, and others have forgotten them. Cochins-Chinas were the first celebrated fowls; they came with double combs; five claws were common; they had unmistakable Dorking heads, and every now and then they appeared with good showy tails. Our best judges were not deceived by these things, and they soon, by setting their faces against improper mating, got the classes filled with pure birds. No one, in those days, ever dreamed the Cochins-Chinas were not a pure breed. They have remained pure to this day, and will do so. They begun the "mania;" and when it was a little on the wane the Brahmas appeared. Some of those who had done well by dealing in Cochins, and who were far-seeing men, were wishing to realise, and seeing that the elevation of a new favourite would of necessity lessen the attraction and value of the old, they tried, by every means in their power, to depreciate the poor Brahmas. First it was declared they were no breed at all, and then they were pronounced to be an offshoot of the Cochins. We will premise that we have bred thousands of Brahmas, and have hundreds now, all true to a feather, all pea-combed, all pencilled alike, and all feathered on the legs. In twelve years we have never bred a clean-legged chicken.

Probably, says one, Cochins crossed with Malay. This would bring no pencilling. Instead of fluff it would give scanty feathering. It would give long clean legs, brown plumage, and a hard, warty, skinny face, for the easy comfortable well-to-do look of a Cochins pullet. In the cocks, the Malay in every point is the antipodes of the Cochins; he is long, gaunt, and angular, and no mixture however skilful can, with these materials, make a Brahma.

The next among the incredulous say Cochins and Dorkings we should say this is far more likely than the previous cross, but it will not make the bird. It would give clean and white legs, five claws, and drooping single combs. It would give ample tails.

The Grey Chittagong has far more affinity to the Malay than to the Brahmas.

We do not envy the feelings of the Barnum class of the American community, who think it smart to prove they have done the world by selling pure things on their warranty, and declaring them to be impure and worthless as soon as they have received the money for them.

It seems to us the difficulty of proving the purity and distinctness of breed in Brahmas becomes less every year. For a long period they had to inhabit the various classes. They have emerged from it, and at late Shows they have been among the most numerous classes, in some instances second only to Dorkings. What do they show? No collection of oddities, but a class fine in colour, comb, and marking as any Hamburg. No sign or remnant of Malay, Chittagong, or Dorking. The evidence of those who keep them is everywhere the same. They differ from Cochins in the following particulars—they eat less, they lay more, they are harder, they are better mothers, and they are more disposed to seek for and to find their food. All this is patent, and yet like our old Marquises, the opponents of these birds, shut their eyes to plain truth, and simply say, "It is impossible these fowls can be pure."—B.

[Our witty and able correspondent, who should have been the Attorney-General of Brahma-Pootra, had Gulliver discovered that kingdom, having undertaken to maintain that

the Brahmas are a pure breed, like a skilful advocate ridicules the contrary opinion, ignores the evidence sustaining it, and puts forward only that which shows that there are some shades of difference between a Brahma and others admitted as Cochins. He passes by the fact, that Dr. Bennett, the originator of the Brahmas, declined to reveal their origin. He passes by the fact, that Mr. Burnham states, from the evidence of his own senses, and Dr. Bennett has never contradicted the statement, that they are a cross between the Cochins and Chittagong. But, says our correspondent, they have pea-combs. We reply by asking, Is this any more a proof of a distinct breed than is the rose-comb in a Dorking? And we next ask, Is their breeding true to colour any more a proof of a distinct breed than White, Buff, and Brown Cochins-Chinas being true to their colours? Let it be admitted that Brahmas are harder, eat less, lay more eggs, are better mothers, &c., than Cochins-Chinas, and what then? Our correspondent will not for a moment argue that these qualities establish a distinct breed. The dark-coloured varieties of Cochins-Chinas vary nearly similarly from the White variety. We have always thought and still think the Brahma resembles the Cochins-Chinas in all the essentials on which a distinct breed can be founded. Let it be admitted to be a variety in feather—and that it is a good variety we do not dispute.]

BIRMINGHAM SHOW.

We have pleasure in stating that the entries for all departments of the forthcoming Exhibition in Bingley Hall are most satisfactory, and that the building will, as usual, be well filled with objects of varied interest. As we remarked in drawing attention to the arrangements for this year, there is ample evidence that the Birmingham Show is firmly established in public favour, and that the efforts of its promoters are thoroughly appreciated by all whose co-operation it is desirable to obtain. No other society has hitherto founded an exhibition so diversified in character as that at Birmingham, bringing together as it does so much that is attractive to the agriculturist, the poultry-keeper, and to many who are enabled to engage in horticultural pursuits; and the experience of the last few years is sufficient to prove that nothing will be overlooked which is calculated to give increased value to these pleasant and useful meetings. We subjoin a statement of the entries for this and the four preceding years:—

	1860.	1861.	1862.	1863.	1864.
Cattle	110	104	131	168	151
Sheep	42	66	110	92	104
Pigs	75	72	70	93	91
Roots	118	196	116	124	109
Corn			15	57	60
Poultry	1,135	1,397	1,364	1,505	1,677
Pigeons	163	220	232	275	290
Total	1,648	2,055	2,038	2,309	2,482

—(Midland Counties Herald.)

A SOUTHERN POULTRY SHOW—MERITS OF COCHIN-CHINA FOWLS.

IN your valuable Number this week you have published a letter from "A WILTSHIRE RECTOR" strongly advocating a poultry show for the South of England, in which desire we southern poultry-rearers heartily concur. Birmingham is too distant, and Brighton and other small Shows do not give any prizes to make it worth our while to send our best birds. I think, however, that your correspondent has either not had sufficient experience of the different sorts of fowls most useful for table and laying purposes, or else his fancy leads him too strongly in one direction, or he would not so strongly urge the claims of the Dorking fowls as so superior to all others for the table.

They are, no doubt, very good when they have passed the perils of chickenhood, and are well fattened for several months; but they are more delicate to rear, more subject to disease than either Cochins, Spanish, Polish, or Crève Cœur, and do not come to perfection for several months. The Cochins are extremely hardy, roup is unknown amongst them, and at

three months old they are perfection for the table. I will allow that the breastbone is rather too prominent; but this does not prevent there being a much deeper and larger slice on the breast than there would be on any Dorking chicken of the same age, however fattened.

I have had many Cochins, hatched since July, killed this month for table; they weigh from 5½ to 6½ lbs. the pair of pullets. These have not been cooped, but fed in open poultry-houses, and the flesh is more white, juicy, and delicious than that of any fowls I have ever known of other breeds. After six months old they require to hang a day or two longer; but a six-months cockerel, well fed, is quite perfect for table, and as large as a small Turkey. They fatten more readily than any other fowl, from being of so tame and quiet a disposition. If taught to come to call, and never driven, they allow themselves to be touched and stroked by those with whom they are acquainted.

I have had Dorking and Cochin chickens in the same clutch treated exactly alike, and the difference in growth has been very remarkable. The Hamburgs have their merits, no doubt, but such wandering birds are a great difficulty to all poultry keepers. The eggs are lost; they mix with the other birds, for no fence, wire, or distance will teach them bounds; and as for table, you might as well expect to fatten a Black Spanish fowl as a Hamburg. I think many people are in the dark as to the superior eatable qualities of the Cochin fowls, from there being such numbers of cross-bred, long-legged, long-necked, narrow-chested birds so called, which bear as much resemblance to the high-bred Cochin as a Mulatto does to an Englishman; but against a real pure-bred Dorking would stand no chance in competition for the table.

I hope, if we have a Southern Show, that we may have a class for Crève Cœur, which, as far as I can judge, having only kept them a few months, bid fair to rival some of our best breeds as egg-producers and birds for the table.—
COCHIN.

GLOUCESTERSHIRE ORNITHOLOGICAL SOCIETY'S SHOW.

THE third annual Exhibition of Canaries and British and Foreign Cage Birds was held at the Lecture Hall of the Working Man's Institute, Gloucester, on the 8th, 9th, and 10th inst. The entries were very numerous, nearly a thousand birds being shown. The competition in Norwich Canaries, between Messrs. Mackley and Walter, was very close. The Lizards were splendid; the Belgians were perfection; and the Mules very fine, the first and second-prize birds being first-rate.

BELGIANS (Clear Yellow).—First, G. Corbett, jun., Birmingham. Second, J. Mayo, Gloucester. Very Highly Commended, W. Rose, Birmingham; G. Corbett, jun. Highly Commended, J. Mayo; W. Phillips, Old Basford, near Nottingham. Commended, G. Harding, Ashton-under-Lyne; W. Williams, Nottingham; W. Townsend, Gloucester.

BELGIANS (Clear Buff).—First and Second, G. Corbett, jun., Birmingham. Very Highly Commended, J. Mayo, Gloucester; J. W. Price, Derby. Highly Commended, G. Harding, Ashton-under-Lyne; J. Brown, Birmingham. Commended, J. Brown.

BELGIANS (Variegated Yellow or Buff).—First and Very Highly Commended, J. Mayo, Gloucester. Second, G. Corbett, jun., Birmingham. Highly Commended, W. Rose, Birmingham. Commended, J. W. Price, Derby; W. Williams, Nottingham.

BELGIANS (Any other variety of Yellow, Buff, or Variegated).—First, W. Phillips, Old Basford, near Nottingham. Second, G. Harding, Ashton-under-Lyne. Very Highly Commended and Commended, G. Corbett, jun., Birmingham. Commended, J. F. Hadland, Gloucester.

NORWICH (Clear Yellow).—First, R. Mackley, Norwich. Second, W. Walter, Winchester. Very Highly Commended, R. Mackley; J. W. Price, Derby; W. Williams, Nottingham. Highly Commended, W. Walter; G. Moore, Northampton. Commended, S. Brown, Birmingham.

NORWICH (Clear Buff).—First, R. Mackley, Norwich. Second, W. Walter, Winchester. Very Highly Commended, W. Walter; R. Mackley; J. W. Price, Derby. Commended, H. Sawkins.

NORWICH (Variegated Yellow or Buff).—First, W. Walter, Winchester. Second, H. Sawkins, Gloucester. Very Highly Commended, G. E. N. Rawlinson, Gloucester; H. Sawkins; W. Gamble, Northampton. Highly Commended, H. Sawkins. Commended, R. Mackley.

NORWICH (Any other variety of Yellow or Buff Variegated).—First and Second, H. Sawkins, Gloucester. Very Highly Commended, J. F. Hadland, Gloucester.

LIZARD (Golden-spangled).—First, J. W. Price, Derby. Second, B. Polating, Old Basford. Very Highly Commended, J. Lingard, Ashton-under-Lyne. Highly Commended, Rev. A. Johnson, Horsleydown, London. Commended, G. Harding, Ashton-under-Lyne; J. W. Price.

LIZARD (Silver-spangled).—First, W. Williams, Nottingham. Second, Rev. A. Johnson, London. Very Highly Commended, G. Harding, Ashton-under-Lyne; W. Williams; B. Polating, Old Basford.

JOQUEL CINNAMON (Not Belgian or Norwich).—Prize, J. F. Hadland, Gloucester. Commended, H. Sawkins, Gloucester.

MALEY CINNAMON (Not Belgian or Norwich).—First, J. Knibb, Northampton. Second, H. Sawkins, Gloucester. Commended, J. Wynn, Northampton.

ENGLISH (Clear Yellow Half-bred).—First, J. Mayo, Gloucester. Second, G. Clapham, Upton St. Leonards.

ENGLISH (Half-bred, Any other colour).—First, E. Dallimore, Gloucester. Second, H. Sawkins, Gloucester. Highly Commended, W. Walter, Winchester.

PLAIN YELLOW-CRESTED (Not Belgian or Norwich).—First, G. Harding, Ashton-under-Lyne. Second, W. Walter, Winchester. Very Highly Commended and Highly Commended, S. Brown, Birmingham.

BUFF-CRESTED (Not Belgian or Norwich).—First, G. Harding, Ashton-under-Lyne. Second and Highly Commended, S. Brown, Birmingham.

PLAIN YELLOW CANARY.—First, G. Clapham, Upton St. Leonards. Second, J. Bowly, Horsepool, near Gloucester. Commended, W. Walter, Winchester.

PLAIN BUFF.—First, J. F. Hadland, Gloucester. Second, W. Ellison, Gloucester. Commended, W. Walter, Winchester.

PLAIN YELLOW OR BUFF VARIEGATED.—First, W. Walter, Winchester. Second, Very Highly Commended, and Commended, J. Mayo, Gloucester. Highly Commended, W. Ferris, Gloucester.

JOQUEL GOLDFINCH MULE.—First, G. Crocker, Plymouth. Second, R. Mackley, Norwich. Very Highly Commended, H. Sawkins, Gloucester; W. Walter, Winchester; R. Mackley; G. Crocker. Highly Commended, W. Walter; G. Crocker.

MALEY GOLDFINCH MULE.—First, J. W. Price, Derby. Second, W. L. Clapham, Northampton. Very Highly Commended, W. Phillips, Old Basford. Highly Commended, H. Sawkins, Gloucester. Commended, W. Walter, Winchester.

ANY OTHER VARIETY OF MULE OR HYBRID.—First, J. Lingard, Ashton-under-Lyne. Very Highly Commended, W. Walter, Winchester.

BULLFINCH.—First and Second, Miss Waring, Gloucester.

GOLDFINCH.—Prize and Very Highly Commended, J. Mayo, Gloucester.

LINNET.—Prize, W. Walter, Winchester.

SKYLARK.—Prize, W. Walter, Winchester. Very Highly Commended, J. Mayo, Gloucester.

BLACKBIRD.—First, E. Welfare, Highnam, near Gloucester. Second, J. F. Roberts, Gloucester. Very Highly Commended, C. Rose, Gloucester.

SONG THRUSH.—Prize, G. Cambridge, Gloucester. Commended, C. Forty, Gloucester.

LARGE BRITISH BIRD.—Prize, H. Arkell, Gloucester. Very Highly Commended, W. Gainer, Gloucester.

GRASS PARAKEETS.—Prize, Mrs. L. Fouracre, Gloucester.

ANY OTHER VARIETY OF SMALL FOREIGN BIRDS.—Prize, W. Walter, Winchester.

GREY PARROT.—Prize, W. Bennet, Gloucester.

ANY OTHER VARIETY OF LARGE FOREIGN BIRD.—Prize, Very Highly Commended, and Highly Commended, Miss L. Fouracre, Gloucester.

BEST COLLECTION OF CANARIES IN ONE CAGE.—Prize, J. Mayo, Gloucester.

BEST COLLECTION OF CANARIES IN ONE CAGE.—Prize, J. Mayo, Gloucester.

BEST CASE OF STUFFED BIRDS.—Prize, — Skelton, Cheltenham. Very Highly Commended, B. Holt, Gloucester; J. James, Gloucester. Highly Commended, J. Mountaney, Gloucester.

The Judges were Mr. G. J. Barnesby, Derby; and Mr. O. Nicholson, Fareham, Hants.

COLLINGHAM POULTRY SHOW.

THE ninth annual exhibition of the above Society was held on the 3rd inst. The entries this year were far in advance of former occasions, both in quality and numbers.

Spanish were good. *Dorkings* contained some excellent pens. A first-rate pen of old Whites stood first in the *Cochin* class, Buffs second, and Whites third. The *Game* classes were splendid throughout, especially the first-prize pen of Duckwings, which were immediately claimed, and will doubtless very soon repay their fortunate purchaser. Mr. Swift's Brown Reds, Miss Crawford's Whites, and Sir St. G. Gore's Duckwings deserve especial mention. Spangled *Hamburgs* were but poor, except the winning pens. Pencilled, however, made ample amends, both classes being capital; Mr. Power's Golden and Sir St. G. Gore's Silvers well deserve their honours. The latter appear to clear all before them, and we never remember seeing so good a pen. *Bantams* formed also excellent classes. In *Game* we preferred many pens before the first-prize—the Rev. S. Reynolds Hole's Blacks. The second-prize Whites were first-rate.

Rouen Ducks were few in numbers, but better specimens it is difficult to meet with, Mr. Boyle's first-prize *Islington* birds gaining the same distinction here, Mr. Lang taking second, and the Worcester winners being highly commended. Mr. Smith's *Aylesburys*, which were also very good, obtained the first prize in the Variety class.

Game Bantam Cocks were a large class, the winner, a beautiful Black Red, fully deserving his position.

We are pleased to announce that the prize list has been greatly increased for another year by an addition of classes and increased prizes.

The *Pigeons* formed an excellent array. Carriers were

numerous and good. Mr. Oates's Short-faced birds were first-rate, as also were his justly-celebrated White Trumpeters. Messrs. Sanday, Edge, Yardley, and Jessop well deserved the honours they obtained.

Exhibitors are greatly indebted to the Committee for their excellent arrangements, and unwearied attention and courtesy. The following is the list of awards:—

SPANISH.—First, E. Brown, Sheffield. Second, W. Cannan, Bradford. Third, R. W. Boyle, Dublin. Highly Commended, W. Massey, Gedney. Commended, M. Brown, Merton Mowbray.

DORKINGS (Any colour).—First, Sir St. G. Gore, Wirksworth. Second and Third, J. Smith, Breeders Hills. Highly Commended, Sir St. G. Gore. Commended, E. Savile, Euford Abbey.

COCHIN-CHINA (Any colour).—First, J. Staley, Collingham (White). Second, R. Swift, Southwell (Buff). Third, T. W. Zerhorst, Belle-Ville, Dublin (White). Highly Commended, M. Brown.

GAME (Black-breasted and other Reds).—First, G. Wolstenholme, Sheffield. Second, R. Swift, Southwell. Third, J. W. Pope, Biggleswade. Highly Commended, Sir St. G. Gore; J. Doncaster. Commended, Sir St. G. Gore; J. Dyson, Halifax; W. Illingworth, Sturton, Retford.

GAME (Duckwings and other Greys and Blues).—First, J. Carless, Hovingham. Second, Sir St. G. Gore. Third, J. Smith. Commended, J. Bradwell; J. Doncaster.

GAME (White and Pile, or Any other variety).—First and Second, Miss E. Crawford, Farnfield. Third, C. Spencer, Thurlston. Commended, C. Spencer.

HAMBURGERS (Golden-spangled).—First, Sir St. G. Gore. Second, Messrs. Birch & Bolter.

HAMBURGERS (Silver-spangled).—First, Sir St. G. Gore. Second, W. E. Brierley. Commended, Sir St. G. Gore.

HAMBURGERS (Golden-pencilled).—First, J. E. Powers, Biggleswade. Second, J. Gars, Bradford. Highly Commended, A. Nuttall, New Church, Manchester.

HAMBURGERS (Silver-pencilled).—First, Sir St. G. Gore. Second, J. Holland, Worcester. Highly Commended, A. B. & T. Kenyon, Accrington; R. Roy, Worcester; T. J. Saltmarsh.

BANTAMS (Gold and Silver-laced).—First, R. Swift. Second, T. C. Harrison.

BANTAMS (Game).—First, R. Dodge. Second, Miss E. Crawford. Highly Commended, Hon. J. W. Fitzwilliam; R. Toder; Sir St. G. Gore; R. Dodge; R. Swift.

BANTAMS (Black, White, or Any other variety).—First, Rev. S. R. Hole. Second, Sir St. G. Gore. Commended, D. Causer, Erdington; H. Savile; J. Staley.

DUCKS (Rouen).—First, R. W. Boyle. Second, S. Lang. Highly Commended, Sir St. G. Gore. Commended, Miss E. Crawford.

DUCKS (Any other variety).—First, J. Smith. Second, Sir St. G. Gore. Highly Commended, J. R. Jessop; H. Savile; J. Smith; M. Brown.

BACK-DOOR FOWLS.—First, R. Cooper, Collingham. Second, Mrs. Hitchen, Beathorpe. Third, H. Mantell.

GAME BANTAMS—Cock.—First, Miss E. Crawford. Second, G. Smith. Highly Commended, W. C. Brierley; R. Dodge; C. Ankland; E. Brown.

PIGEONS.

CARRIERS.—First and Second, G. H. Sanday, Holme Pierrepont. Commended, G. H. Sanday; H. Yardley, Birmingham.

POWTERS.—Prize, E. Brown.

MOTTLES.—First, W. H. C. Oates, Beahorpe. Second, H. Yardley.

BALD OR BEARDS.—First, W. H. C. Oates. Second, J. W. Edge, Aston New Town.

SHORT-FACED TUMBLERS (Any other variety).—Prize, Mrs. Oates.

BARNS.—First, H. Yardley. Second, W. Massey. Highly Commended, G. H. Sanday. Commended, J. Firth.

JACOBINS.—First, G. H. Sanday. Second, W. Massey. Commended, G. W. Edge.

OWLS.—First, G. H. Sanday. Second, H. Yardley.

TRUMPETERS.—First, Second, and Highly Commended, W. H. C. Oates.

TURBITS.—First, J. R. Jessop. Second, H. Yardley.

FANTAILS.—First, J. Hives. Second, J. W. Edge. Highly Commended, D. Causer.

ANY OTHER VARIETY.—First, M. Ord. Second and Third, H. Yardley. Fourth, J. W. Edge.

JUDGES: Poultry.—T. Challoner, Esq., Brunt Leys. **Pigeons.**—W. B. Tegetmeier, Esq., Muswell Hill, London.

SOUTHERN COUNTIES SHOWS.

YOUR correspondent, "BRAHMA POOTRA," asks for any suggestions from me, as to the possibility of getting more southern shows than there are at present. Although not pointedly writing on this subject in my remarks in the same week's Journal, I hinted at one of our great difficulties, the want of a large population who would make the show day their holiday, and I am disposed to think it important to insure success in a financial sense, that the poultry, should be attached to cattle shows. I have at various times visited shows, purely of poultry, and have been forced to reflect thus: "Well, if the visitors are not more numerous than they are at present, this can never pay," and I have seen these shows cease after a second or third annual exhibition. It appears to me that amongst the general public, a poultry show is not sufficient to obtain the holiday for the working men. "What do you want with cocks and hens?" is, perhaps, the reply to the request; but if it is the annual

meeting of the "Agricultural Society," the response can hardly be negative, and I think all allow that when poultry are shown, it is the department most thronged. Well, then, if I am correct in this idea, it would appear to be the first duty of exhibitors resident in the neighbourhood of an agricultural association, to urge the tacking on poultry, and if this has been already done, to try to improve the prize list. Here let me say, that in two instances where I have tried this course, it has been very successful, and the Secretaries have been most courteous, although personally unknown to me, in considering any suggestions I have offered, and often in trying them.

Well, then, let me suppose that some brother or sister maniac has been successful so far in inducing the agricultural society to admit our pets, the show, as regards poultry, may be a perfect failure, simply because the Secretary does not understand the importance of advertising, or if he advertises at all, he does it insufficiently. It has frequently happened to me to read reports of shows in your Journal, to which I would have sent specimens willingly, but your notice of the show is the first notice I have seen of it; in fact, the show is over when you first hear of it. Or, again, the advertisement appears for the first time on the day the entries close. How would a diminished scale for shows, when inserted three times, answer? This, however, is beyond my tether.

The Secretary might secure a tolerable entry, by cutting from the catalogues of the larger shows the names of exhibitors residing within a certain distance, and sending them at once a schedule and certificates of entry by post, soliciting entries.

I am not so certain that according to the locality selected for the show, an increase of certain classes of fowl, will do much for southern shows. Manifestly, this will not make the entries greater, if exhibitors do not know that such a show is about to be held. This latter point is very essential, especially in the lesser shows, as held in the north. Their proposed existence must be made known. I should say it was simply owing to this fact, that no Brahmas were seen at Tunbridge Wells. Give them but a chance, and they may be seen. Dorkings may be a southern county bird, but they are kept all over the country, and have numberless admirers, now that by experience their delicacy during chickenhood appears to have been overcome. Hamburgs, on the contrary, certainly have more friends in the north.

Are there no friends to poultry who have influence with the Gloucester Agricultural Association? Time was, when they used to have a splendid show of poultry in connection with the animal portion, but some years ago it was discontinued, and thus an annual show was lost to the south. I hope some person may have sufficient influence to restore us this.

One word in conclusion, as to the Poultry Club, the short report of the meeting noticed in your pages, lately contained a statement which will go far to disarm much of the opposition, at least, so I humbly imagine; the alteration of name from "Rules for Judging," to "Standard of Excellence, &c., for exhibition," is very important. The exposition given by good judges, the reasons why they have in certain cases awarded prizes apparently against the standard would be useful to all of us, and your own columns proved very lately that the best general Judge of the day, Mr. Hewitt, has no objection to defend his judgment in certain cases. I should myself have been greatly pleased with an explanation of awards in another class, it is, however, too late now.—Y. B. A. Z.

WINTER AND SPRING MANAGEMENT OF STOCKS IN COMMON HIVES.

I BEGAN bee-keeping this season, and have five straw hives in a shed (same as Neighbour's). They stand on cases with drawer for feeding, on Nutt's principle, and are all well covered-up with coats and carpet. Now, as ventilating hives in winter is recommended, I want to know if I should remove the carpet, &c., and open the block fronts in the cases on which the hives stand, and insert, over the holes, into the feeding-drawer or cases perforated tin, and then ventilate the shed wall in which the hives are? My main object next

year will be to get swarms so as to start a lot of frame-hives or boxes.

Please also say if it is wise in the spring to disturb the bees to clean the floor-boards, and when is it the right time. I have partly closed the entrances to my hives by means of wedges. Do you consider this wise, as it stops ventilation? About a month ago my hives weighed from 20 to 30 lbs. each, and they seem strong. About what time should you resort to feeding, as I want early swarms?—J. A.

[Common straw hives require no ventilation, and the less they are meddled with during winter the better. If the coats, carpets, &c., have been long in their places, take advantage of the first fine mild day to remove them, and clear out all vermin, such as spiders, moths, earwigs, &c. After shaking and beating (the coverings, not the hives), replace them and make all snug for the winter. The latter end of February or early in March, according to the season, repeat the operation, and if you can with little disturbance substitute clean floor-boards for the dirty ones, so much the better. A few ounces of food given at regular intervals by means of an inverted bottle, two or three days apart at this season, will be of use in stimulating the breeding powers of the queens. Entrances should be contracted during winter, but even this must in some degree be regulated by circumstances, a populous colony requiring more air, and, therefore, a larger doorway than a weak one.]

HOW TO RECTIFY IRREGULARLY-BUILT COMBS.

I FIND the following passage in a recent letter from one of my most valued aparian correspondents.

"Some of the writers in THE JOURNAL OF HORTICULTURE complain of their combs on bars being crooked, and fixed transversely.

"If you found a Woodbury frame-hive in this condition, and wished to inspect the middle combs, but found it impossible to move the frames, how would you proceed to make the inspection? Would you begin by taking out the side bars first, and polish each bar straight in succession? or would you begin at the place where you wish to make the inspection, and pull up the frames, *volens volens*, having first inserted a knife between the bars, so as to separate the combs?

"I make a supposition with the view to an answer in the Journal for the benefit of novices."

In the case supposed by my correspondent, I should commence by extracting a side comb (that which happened to be the straightest, for choice), and rectify whatever irregularity might exist in each comb one by one, partially or even entirely detaching from their bars such combs as might require it, and after straightening them, temporarily support those which had been either partially or wholly detached by means of wire, &c. All these temporary supports may usually be removed the next day; but it may not be amiss to state that all operations of this kind must now be deferred till spring is pretty far advanced (say April), and should on no account be attempted either late in autumn, or during winter.—A DEVONSHIRE BEE-KEEPER.

VARIATION IN LIGURIAN BEES.

WILL you give me your opinion upon the enclosed specimens of bees? No. 1 is from a hive which breeds all alike, with the exception that about one in a hundred is darker than the rest. No. 2 is from the hive referred to in page 842 of THE JOURNAL OF HORTICULTURE, and which breeds all varieties. No. 3 breeds all alike; but all are darker than the original stock, unless the few in No. 2, which are most brilliantly marked.

I should esteem it a favour if you would let me know whether any are pure or not, and whether, as I am told, pure-breeding queens can be obtained from the egg of a hybridised one, if impregnated with an Italian drone, or if, when they are once impure, they remain so.—A. N. B.

[The colour fades so much in dead Ligurians, that the specimens accompanying your letter are really of little use

in helping us to decide the question submitted to us. Nevertheless, you are welcome to our opinion as far as it goes. No. 1 we should consider pure, as there is some degree of variation even in the purest stocks, and the only test we admit in our own apiary is an entire absence of common bees. This rule condemns No. 2 as hybridised, and would clear No. 3 from suspicion, if (which we rather doubt), the bees are really "all alike." We see no reason why an isolated black stain should not in the course of time be bred out of Ligurians, if you can but avoid a relapse, just in the same way as the Ligurian strain becomes bred out of the common bee in a few generations. The difficulty would be in avoiding a repetition of the dark taint.]

JOINING LIGURIAN QUEENS AND BEES TO ENGLISH OR BLACK BEES.

IN uniting queens there is always a risk, and I cannot find out the mystery why the bees will not accept a queen that is given to them, and after they reject her, if she is given to another stock they receive her joyfully. Again: the same stock that rejected the first queen will gladly accept another queen, if given to them almost immediately afterwards. A short time since I had a case that illustrates the point.

Having imported direct several of the most pure, beautiful, fertile Ligurian queens to be found on the continent, I placed one over a stock for some hours that had its queen removed two days before. I then admitted one bee at a time and they behaved very well, until half a dozen had been admitted, when they seized and attacked the queen, and I could not separate them without taking the queen up in my fingers and actually pulling the bees from her. This took place four times, when seeing that the bees would not accept her, I put her over another stock, and when I admitted the bees they received her joyfully.

I then gave the stock that had rejected the queen another of the imported Ligurian queens, and they received her in a friendly way and conducted her in triumph into the hive.

Since I sent you the account of joining bees on the 14th of October, I have joined five more lots of bees, and everyone successfully. They were driven on the 31st of October, but I do not recommend driving bees so late in the season, but the farmer had neglected them, and would not feed them. The bees in some of the stocks would not leave the combs, so we had to cut the combs out and brush the bees with a feather into the empty hive. I did not hastily discard peppermint scent until I found it from practice useless.—WILLIAM CARR, Clayton Bridge Apiary.

OUR LETTER BOX.

COCHIN-CHINA FOWLS (*E. C.*).—We imagine your birds are Silver Cinnamon—the body a sort of French creamy white, and the hackles darker. They will breed good chickens with a buff cock, and are an esteemed variety. Another class is ordinary Cinnamon, and is coloured exactly like the spice after which it is named.

MOULTING OF SPANISH PULLETS (*Cochin*).—We have known them when hatched in January to change their feathers the same autumn almost entirely, but not regularly to moult. The cocks do, and we have some now naked-necked.

BEST-PAYING FOWLS (*One who Wishes to Make his Hens Pay*).—Buff or Partridge-coloured Cochin Pullets, and an adult Dorking cock, will supply eggs in the winter, and produce good table chickens. The Pullets should be bought every year, and their predecessors parted with.

FOOD FOR SKYLARKS (*G. R. B.*).—Bread and cheese is a first-class food for Skylarks. A little whole hempseed, groats, or cooked meat finely minced may be added occasionally with benefit. Larks should always have a green turf to peck at, and the bottom of the cage be thickly covered with clean dry sand for them to dust in. Hempseed is best given whole, but is not a necessity, and must be used sparingly. The meat must not be salted.

GERMAN PASTE (*Idem*).—Take two table-spoonfuls of lard free from salt, beat it in a saucepan till it is nearly boiling, add four table-spoonfuls of treacle, keeping the saucepan near the fire but not putting it on again, and stirring the treacle well in gradually. Keeping it still near the fire just to keep warm, stir in peasmeal till it becomes a stiff crumbly mass; a little mawseed to be added. About $\frac{3}{4}$ pints of peasmeal go to the above quantity.—B. P. B.

SEVIERALS IN CONFINEMENT.—In your impression of the 25th of October, your correspondent, Mr. Hunter, states that squirrels neither jumped nor ate acorns. This, I think, is unusual, as I have long kept some of these pretty animals, and I have now two, who daily spring and leap, and freely eat acorns, which, indeed are their principal meal. They live in a cage with some wild Rabbits, several varieties of Doves, and a pair of Golden Pheasants.—GEORGE H. BROOKS.

WEEKLY CALENDAR.

Day of Month.	Day of Week.	NOVEMBER 22—23, 1864.	Average Temperature near London.			Rain in last 37 years.	Sun Rises.		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock after Sun.	Day of Year.
			Day.	Night.	Mean.		m.	h.	m.	h.	m.	h.	m.	h.			
22	Tu	Titmice draw near houses.	48.6	34.1	41.4	20	33	47	0	44	5	0	57	0	23	13	347
23	W	Grey Wagtail arrives.	47.0	34.6	40.8	15	34	7	59	3	6	1	17	1	24	13	348
24	Th	Sweet-scented Coltsfoot flowers.	47.1	32.1	39.6	11	33	7	58	3	12	2	50	1	25	13	349
25	F	Larch leafless.	46.9	33.4	39.6	19	36	7	57	3	17	3	2	3	26	12	350
26	S	Oak leafless.	47.0	33.0	40.0	19	39	7	56	3	22	4	29	3	27	12	351
27	Sun	ADVENT SUNDAY.	46.6	34.3	40.5	17	41	7	55	3	28	5	59	3	28	12	352
28	M	Elm leafless.	48.0	35.3	41.7	18	42	7	55	3	35	6	37	3	29	11	353

From observations taken near London during the last thirty-seven years, the average day temperature of the week is 47.7°, and its night temperature 33.7°. The greatest heat was 64° on the 26th, 1838; and the lowest cold, 9°, on the 23rd, 1856. The greatest fall of rain was 1.21 inch.

AUCUBA JAPONICA VARIEGATA BEARING BERRIES.



O one who had the pleasure of seeing the plant will have forgotten the interesting and handsome specimen of *Aucuba japonica* vera, covered with its brilliant scarlet berries, which was exhibited by Mr. Standish, of Ascot, at the first spring meeting held at South Kensington on the 9th of March last.

Few plants, if any, ever received such unanimous and well-merited approbation. It has been the only new plant of the year which has been signalised by having the Society's Silver Flora Medal awarded to it. For this addition to our ornamental shrubs we have to thank Mr. Fortune, who introduced it into this country with many other very valuable Japanese plants.

At the time when this fruit-bearing *Aucuba*, it being a female plant, was introduced, the stamen-bearing or male plant was brought with it, by the fertilising powers of which we were promised in due time to be able to make the well-known *Aucuba japonica variegata*, which is a female, a fruit or berry-bearing plant. The promise then made has been fully realised; and a fine plant of our old friend *Aucuba japonica variegata*, 8 or 10 feet in circumference, can now be seen in Mr. Standish's nursery at Ascot, well covered with berries, which, though at present green, are fast showing symptoms of the approaching change to bright scarlet. The plant which is now producing its berries, was temporarily planted in one of the Vine-houses for the purpose of being experimented upon. It is truly most interesting and gratifying to all true lovers of horticulture to see the perfect success attending the fertilisation of this plant.

The time is not far distant when the male or pollen-bearing plant of this shrub will be attainable by all; but at present few only possess it, the value being so great and the stock very limited. In the meantime we may anticipate the privilege of seeing these shrubs, which grow so luxuriantly in every situation in this country, and which are so ornamental by their variegated foliage, covered at Christmas (a rival with our truly-loved English Holly) with brilliant scarlet berries.

There are many other varieties of the *Aucuba*, not yet sufficiently abundant to be known, but very beautiful and varied both in foliage and in the berry. Mr. Standish has a plant now ripening its berries, which appear to be of a bright yellow colour. There is very little doubt but that next year many varieties of *Aucuba* will be exhibited. Several of the leading nurserymen have been making collections; and when these new kinds are acclimatised, and within the reach of the public as respects

their price, a very great addition will be made to the hardy evergreens now used for winter-garden decoration in this country.—X.

HARDY FERNS:

HOW I COLLECTED AND CULTIVATED THEM.—No. 4.

ONE great point in a tour is the sort of talk you meet with during its course. On the coach or in the steamer you are thrown into much nearer relationship with your fellow passengers than on the less sociable railway. Unhappy they who wrap themselves up in their dignity and chew the cud of their own thoughts, instead of enjoying a healthy interchange with the minds of others!

My black tourist's bag with its conspicuously visible trowel was a useful help to me in the matter. It proved a sufficient introduction to foreigners, and to those pleasant English people who travel with the happy wish of being pleased with God's glorious creation, whether in the human or natural world. Many a treasure has found its way to my bag from a fellow traveller's wallet, unlocked by the sight of the magic trowel. Many a talk has it given me of the vast forests of America, many a comparison of their vegetation with our own.

Shall I be pardoned if I say that of all foreigners I prefer Americans to travel with? Their keenness and comprehensiveness of sight is extraordinary. While another would but take in the general outline of a view, an American has perceived and jotted down tidily in his memory every important feature, each tiny peculiarity. I once spoke to one of the scarcity of Ferns about Loch Lomond. "Yes, madam," he replied; "but I gathered thirty different wild flowers there in half an hour."

Americans talk to you at once, and talk in a totally different manner from English people. They seem to be burdened with no lurking fear of there being danger in making a pleasant acquaintance—they do not appear to wish to know even your name. Smith is to them equivalent to Brown, if only Smith will exchange his ideas in return for the unreserved pouring-out of the treasures of their own well-stored minds. I have never known an English gentleman do this. He is always perfectly polite; but why should he trouble himself about a stranger he will never see again—a nobody? He has plenty to think about, probably others have the same.

But to return to my trowel, to which amongst other things I owe two beautiful clumps of *Septentrionale*.

In the course of our wanderings, after "doing" the Caledonian Canal, and searching in vain for *Hymenophyllum unilaterale* at the Falls of Foyers, and making many a pretty addition to *Cystopteris* from the Muir of Ord, we arrived at Dunkeld, that loveliest of all lovely halting-places, where hill and valley, rock and river, contend with each other in sweetest rivalry as to which shall lend the greatest charm to the scenes around. About two miles from Dunkeld is the Stenton Rock, and growing there side by side may be found *Asplenium septentrionale*, *A. germanicum*, and *A. trichomanes*.

Trowel in hand, I marched off to hunt. "Where

awa?" said an old road-scraper to me; "ye'll be seeking for something, nae dout." I explained I was going to Stenton for Ferns. "Weel, weel, ye'll find them unco high, too high for a leddy, maybe."

The old road-mender was right. I returned hours after, wet through with what in pleasant mockery is called Scotch mist, but Fernless. "Ye'll hae been disappointed," said my old friend when he caught sight of me. "Ye come to me the morn and I'll see. I live at Stenton, ye'll hae seen my hous for bye the rock."

The next day I kept my appointment; and my friend, true to his word—for he was a very Scot—had two large clumps of *Septentrionale* for me. "Oh, leddy," he said, "the gran gardeners hereabouts hae taen all the ither sort, and I could nae find ye one root."

When I offered the old man a shilling he answered, "Nae, nae, keep your siller, I am glad to hae pleased ye."

And I was pleased, for never have I seen in England such plants of *Septentrionale* as these. They were no unhealthy-looking scraps picked off the face of the rock, but compact tufts (one of them mixed with *A. trichomanes*), of 3 or 4 inches in size. Much has been written about the difficulty of managing *Septentrionale*, but I have hitherto found none. I planted these specimens (considerably reduced by gifts to friends), in an open fernery facing the south, and they came up year after year luxuriantly and well, but they do not increase.

Asplenium germanicum is said to grow on the Stenton Rock, as well as the *septentrionale*: I was shown a plant of it; the tiny forked fronds were about 1½ inch in size, and not so broad as *Septentrionale*, the forked ends being almost as fine as a thread. I have never possessed this Fern, nor have I ever seen a healthy specimen of it, or one I should know as perfectly distinct from *Septentrionale*; indeed, I believe the plants shown to me as *germanicum* have only been diminutive specimens of *Septentrionale*.

From the Stenton Rock in the cold north my mind wanders to the sunny south, where, under conditions somewhat similar, and yet how widely different, I have seen at Bagneres de Luchon in the Hautes Pyrénées, the entire face of a rock, in the very eye of the sun, entirely covered with *Septentrionale*: the fronds were nearly double the size of our English Fern, and the forked ends one mass of rich brown spores.

I seldom look at *Septentrionale* without being, in thought, carried away to beautiful Luchon. I seem once more to be by the side of the Fern-covered rock. It stands jutting out on the road leading into Spain, down which gaily-dressed muleteers are driving their mules, laden with wood for the winter's use; the merry bells are tinkling in the air as the poor mules shake their heads under the heavy burden. On my left hand are jagged rocks, whose crevices are gay with wild flowers; on the right are Beech-covered hills, with pretty *châlets* dotted about here and there, slanting down to the town, with the river, lined with golden Poplars, flowing through. Before me, in the far distance, is the Port de Venasque, its snow-capped peaks glitter like diamonds in the sun, and seem to sparkle with delight at the glorious scene stretched out beneath them in the fair land of Spain. I inhabited one of those *châlets* on the Beech-covered hill. The garden is a very wilderness of flowers, and in this wilderness there is a little oratory with a statue of the Blessed Virgin, whose shrine is always decked with flowers, and the hand that places them there is the rough toil-stained one of the old housekeeper, Jeanne.

"My mistress used to put them there," she said; "but she died when the little miss was born, and now there is only me."

Good old Jeanne! with her hard features and tender heart! whose only outward religious observances seemed to consist in placing the flowers and in sundry crossings of herself. How much I used to enjoy our shoppings and marketings together in the early morning; Jeanne's head coquettishly adorned with a brilliant amber kerchief, tied in a dainty knot on one side, and she herself trying, with unexampled patience, to make me a proficient in (her) French, which consisted of a most bewildering *patois* of Spanish and French mixed together in one confused mass.

I have never found *Septentrionale* growing in the shade, nor do I believe it could endure such a situation; it luxuriates

in warmth and sunshine, and does not care for much water. The one great point in cultivating it is thorough drainage; if there is any moisture hanging about, the base of the fronds will decay, and gradually fall off, and a tiny wireworm will come to help in the work of destruction. When the least decay is visible in the fronds, dig up the plant, and look to the drainage.

At Dunkeld I found quantities of very fine *Beta muraria* growing in the old wall of the Duke of Atholl's park. I managed to pick out a great many roots with considerable portions of earth attached; but, alas! I have never made *Beta muraria* live for more than two years in cultivation. I have tried it with old mortar, planting it upside and downside and every way, but all to no purpose; I am now trying it in a flower-pot nearly filled with drainage, placing the flower-pot sideways in the fernery, and covering it with earth.

The Duke of Atholl's grounds are strictly preserved, and I have a strong aversion to going over houses and grounds with a bought permission, so one day I determined to enter them as a freebooter. I was stopped by a little fellow.

"Ye'll nae be ganging there," he said; "it's the Duke's private walk."

"But supposing I'm the Duchess," said I.

"Weel, if ye're the Duchess ye maun go," said the boy; and then, amazed at his own temerity, he ran off, leaving me to retrace my steps.

On the road between Dunkeld and Aberfeldie I found a very beautiful variety of *Athyrium Filix-femina*, some of the fronds were nearly 2 feet in length, the stipes of the younger fronds were of a pinkish brown, and very bare, the pinnae were thrice-pinnate, and the whole Fern had a graceful feathery look. I have since seen what I believe to be the same Fern under the name of *Filix-femina plumosum*. I found it not far from the pretty waterfall called the Rumbling Bridge, where troops of merry children meet you with baskets and pinafores full of rich dark red Bilberries, and the far-off distance has at eventide the sunny glow of the south falling on ruddy banks of Heather.

I found *Lastrea spinulosa* in many places in Scotland; it must be hunted for in shady nooks, where it grows side by side with *A. Filix-femina* and *Blechnum spicant*. Mr. Bree gave me a very curious specimen of *L. spinulosa* which he found growing on the Coleshill bog; the stunted frond was little more than a foot in size; in colour it was a sickly-looking greenish yellow. Mr. Bree also gave me a frond of the very same root when cultivated, and it would have puzzled any one but a close observer to have known they were the same Fern; and it is this altered aspect of Ferns under altered conditions that makes their study bewildering to a beginner. I dare not venture to say that *L. spinulosa* under any conditions would turn into *L. dilatata*, but it looks uncommonly like it; and you find varieties so nearly approaching both Ferns that it is difficult to name them. This difficulty does not exist with *Lastrea uliginosa*, the under pinnules of *uliginosa* being the same size as the upper ones. *Uliginosa* seems to approach nearer to *L. rigida* than any other Fern, and yet on placing the two side by side it would be impossible to mistake one for the other, the entire growth of *uliginosa* being taller and much more robust, while the pinnae are much farther apart.

Lastrea rigida I have never found, so I have been reduced to the necessity of buying one; and of all my Ferns I have found *rigida* the most tormenting to deal with, its likes and dislikes are as many and as unaccountable as those of a wayward child. When I bought the plant of an amateur dealer for 3s. 6d., it consisted of a nest of brown fronds, with one withered frond about half a foot long, and two little deformed fronds by its side. It was very unpromising, and my friend the dealer assured me it was an ill-natured subject that repaid all your care by giving you nothing but those black looks. I did all I could for the "ne'er do weel." I made it a lovely home with well-drained fine leaf mould for its food; but a year passed, and its new fronds were dwarfed, dark, and ill-natured-looking; moreover they were evidently rotting away. I looked for the reason, and found a large Fern, planted above *rigida*, dropping some of its surplus wet upon it. I moved it to a clearer place, and at last I gave satisfaction. I housed it in winter, and planted it in a clear sunny spot in summer, protecting the young fronds as I do those

of *Polystichum lonchitis*, and it has rewarded me beyond my expectation. It has now a crown of healthy fronds covered with fructification, and it has thrown out two young plants at its side: when these are well established I shall try the parent Fern out of doors all the year, covering it with litter during hard frosts.—*FILIX-FEMINA*.

THE FRUIT-ROOM.

It is certainly much to be regretted that although most structures intended for horticultural purposes have received their full share of attention, and the most approved modes of erecting them have been at times ably discussed in this Journal and other gardening works, the fruit-room has scarcely ever received a passing notice. Assuredly this cannot arise from the indifference with which it is regarded, for it is of the utmost possible importance; but somehow fruit-rooms, generally so called, form such uninviting features in most gardens that they are never visited by fashionable company. That this should be the case is unfortunate; for a nice collection of Apples and Pears in the month of November is as well worth inspecting as anything the plant-houses contain at that time; but when a makeshift of a shed, or some hovel no longer of any other use, has to be put in requisition for the purpose of keeping fruits, those having the management of it naturally shrink from inviting any one to see their collection when huddled together in such humble quarters. They nevertheless manage now and then to keep their fruit pretty well in such houses or sheds, and not unfrequently better than is sometimes done in structures of greater pretensions, and we are, therefore, led to inquire if there is not something wrong with the latter, and a careful investigation into the matter confirms the suspicion that this is really the case. The subject of keeping winter fruit being so important, let us examine the elements which either lead to success or the contrary.

When we look into the mode which Nature adopts to insure the reproduction of each species, we find that all seed-vessels or receptacles have a function to perform, and when this is accomplished they perish. Some seeds are scattered abroad by the bursting of the seed-pod, and by a jerk thrown some distance. Others are clothed with down, and dispersed far and wide by the wind. Others depend on their removal being effected either by birds, animals, or some similar agency, and of such, perhaps the Apple and Pear may be accounted examples, while they also exhibit the seed enclosed in a fleshy substance capable of resisting decay for a greater or less period—in the wild ones, certainly until the proper time for depositing the seed in the ground; and assuming the fruit to fall where it is grown, the conditions for its keeping are prepared for it by natural means. Dead leaves and herbage form a sort of nest as well as a covering, securing the preservation of the seeds until the appropriate time for their being deposited in the earth. Our object, however, is the preservation of the fruit, and the seed is no further regarded than as being a component part of the fruit; but as Nature has shown us that a cool and far-from-dry medium serves all the purposes of keeping the fruits spoken of through the inclement part of the winter, we may not be far wrong in copying to a certain extent some of the conditions thus laid down.

It being shown that a cold medium is the best to prevent decay in the fruit now under consideration, the question naturally arises, How is a cool atmosphere to be obtained? To a certain extent we have but little control over the temperature, for though we might increase that of the atmosphere of the room, we cannot easily diminish it; but something may be done in the latter way, or, at all events, the evils of overheating our fruit-rooms may be avoided. To cram a house with Apples and Pears in the warm weather of the early part of September is making it little better than a pest house, especially if there be very little ventilation; for the quantity of fruit lying in so confined a space engenders heat, or, what is equally bad, vapours are given out that are anything but favourable to the preservation of the fruit. Yet how common it is to crowd the fruit-room so early in the season. Apples keep falling, and birds and wasps attack the Pears, and, consequently, there appears to be no alternative but covering the shelves with fruit, perhaps

three or four thick. Ripening takes place with more or less rapidity in consequence of the forcing to which the fruit is subjected, the close stifled state of the room, and the warm condition of the external air hurrying on the ripening, and ultimate decay, of the whole of the fruit there collected.

Assuming, therefore, the position in which Nature often deposits her fruits to be on the whole favourable to their keeping (and we often see that an Apple which has fallen softly amongst long grass or other herbage exhibits as high a state of preservation when found there in winter as others of its kind when housed in the ordinary way), we are led to consider that plenty of fresh air is by no means unfavourable to the keeping of such fruits. On this account, therefore, our fruit-rooms ought to be well ventilated, and they ought not to be too low, or if from circumstances they must be so, they should be ventilated at top as well as at the sides and ends. The best form for a fruit-room when it stands alone is an ordinary span-roof, of tiles laid on dry—that is, not embedded in mortar in the usual way; below the rafters the roof may be ceiled halfway up following the inclination of the rafters, with a flat space of some 3 or 4 feet in the centre, in which a latticed ventilator may be fixed, the latticework very open, and extending the whole length of the room. There should be a sort of contrivance for closing the latticework—a board, say on hinges, like a long trap-door. This is better than sliding latticework, as the latter is apt to get out of order, and is not easily moved. The tiles, being open, will allow all vapours that find their way into the apex of the roof to pass through, and the ventilator will only require closing in very severe weather. In dry situations it would also answer as well to have the house partly underground, say 3 feet or so; this tends to keep the temperature more equable, and in the hot dry weather of the dog-days is certainly a relief from the heated air outside. The side and end ventilators may be of glass, not allowing, however, any windows to the south, and for the same reason it would be better if the building were shaded from the mid-day sun in that direction, buildings being better for that purpose than trees. The situation ought also to be unconfined, and free from all noxious vapours and damp exhalations. The internal fittings might be in the usual way, a series of shelves all round, and a table shelf in the centre, and if the latter had drawers in it so much the better. The shelves ought not to be too close above each other—four or five in a tier is quite plenty—the highest one being at least 7 feet from the ground. It is customary to make the shelves partially open, but I am not certain that this is required. One of the best-keeping fruit-rooms I ever had to deal with had slate shelves, close and impervious. Care, however, was required not to allow the fruit to tumble about on a shelf so hard. I am no advocate for straw, or anything of that kind, under the fruit.

There are many conditions in which fruit has been kept tolerably well, and for a long period. A cool cellar is not by any means a bad place, only the quantity ought not to be large, or ventilation must be obtained; but the currents of fresh air that are wanted in September, may in a great measure be dispensed with in December, or, at all events, much less will do. A cellar is better than a great many fruit-rooms. I have also retarded some fruit in an ice-house and kept it later there than it would have kept in another place, but the propriety of retarding fruits, excepting for special purposes, is much questioned; certainly the flavour is deteriorated. I have also seen a quantity of Apples buried in the ground like Potatoes. This was merely for an experiment, and the result was that many of them burst, much the same as a Potato will when boiled with the peeling on. Keeping them in a chalk-pit or cave approaches so much to the cellar that it may be classed as the same. Sheds of all kinds are used to store Apples in most places where they are grown abundantly, and in Kent thousands of bushels are kept in heaps on the floor of the hop-drying kilns, which, being lofty and airy, are by no means bad places. The great misfortune is, the fruit is often laid in heaps from 2 to 3 feet thick, and a little straw thrown over it in severe weather. Keeping Apples in air-tight boxes or jars has been abandoned of late years, and casks of various kinds are occasionally used, but more frequently for transporting fruit than for storing it away. Although Apples will occasionally keep a long time under conditions different from

those now given, it is not to be inferred that these methods are better, as the fruit might, perhaps, have kept a little longer if fairly tried in the way described.

Before closing these remarks I may observe, that as fruit ripens earlier in certain seasons than in others, and in some is charged more abundantly with those juices which promote decay, the keeping is not always alike, even when attempted in the same way. A well-perfected fruit may be as forward one season by the 1st of September, as it will be in another by the end of the same month; while it is almost needless to observe, that the ripening, and, consequently, decaying influence of a warm month like September tells more than an equal length of time later in the year. It is not too much to say, that the thirty days in September ought to be accounted equal to the fifty days that next follow, taking, of course, average seasons. Hence, fruit that ripens so much earlier than usual has but a poor chance of keeping well if the weather be warm. Those, therefore, that want to prolong the season of any particular fruit must keep it as cool as they can, and success will be in accordance with the reduced temperature, all other conditions being favourable. In a general way, the place most conducive to the good-keeping of fruit is similar to that which preserves milk—one with a cool atmosphere and abundant ventilation, and free from all vapour, bad smells, and stagnant air of all kinds. In fact, a fruit-room ought to be as sweet as a dairy.

J. ROBSON.

THE NEW ROSES.

WHEN one passes away from the region of what one has seen in the matter of flowers to what one has heard, it is very much, I fear, as great a change as from fact to fiction. And certainly there have been few writers of fiction who have excelled some of our French friends in their descriptions; for seeing their glowing accounts of their novelties and seeing the novelties themselves are two very different things, one being too often but the "counterfeit presentment" of the other; and I can conceive nothing more galling than for a nurseryman to be compelled to throw away dozens of plants which he had propagated with so much care and trouble in the belief that they would be sought after. I therefore feel more than ever the difficulty of forecasting as to the probable value of the eighty and odd new Roses now offered. In truth it must be the merest conjecture, and chiefly dependant on one's knowledge of the growers and their previous exploits. We may thus speak hopefully of what a Verdier, a Margottin, a Lacharme, or a Gaillot may produce; while a Touvais, a Fontaine, or a Moreau will not inspire us with much confidence. I shall therefore simply give the names with the descriptions of the French raisers, and such conjectures as may occur to me from my previous acquaintance with the Roses of former years.

GUILLOT FILS.

21. *Abbé Berlièse*.—Full flowers, well formed. Colour changing from a reddish cherry to carmine rose.
22. *Madame Roussel*.—Full, beautiful tender rose; reverse of petals silvery.

23. *Souvenir de Bernardin St. Pierre*.—Full flowers, well formed, imbricated. Colour varying from a velvety crimson rose to slaty-red violet, with the centre a shaded red. I have heard a good account of this Rose from Mr. G. Paul, who told me he saw it at Lyons. It is evidently much thought of by the raiser; and from the description, which would refer it rather to the class of such flowers as André Leroy and Mrs. William Paul, I should be inclined to think favourably of it.

GONOD.

24. *Achille Gonod*.—Full flowers, well formed. Lovely carmine red.

25. *Madame Hermann Stenger*.—Flowers full, well formed, standing well on the plant. Beautiful rose, shaded with sulphur in the centre.

26. *Madame Moreau*.—Flowers full, Pæony-formed, and convex; outer petals very large. Colour clear lively red, shaded with violet.

Of these there is something novel in the description of the last flower, and it may be possibly good; but the description rather inclines one to fear that coarseness may prevail in it—a fatal defect to a Rose.

PORTMEER FILS.

27. *Charles Wood*.—Flowers full, very well formed. Very dark red shaded with black.

28. *Jean Rosencransz*.—Flowers full, well formed. Lively coral red.

The first of these reminds one of Lord Macaulay, a flower of the same raiser's. I hope it may be worthy of the rosarian whose name it bears, for it will then be what the boys call a "stunner."

TOUVAIS.

29. *Belle Rose*.—Very vigorous. Flowers full, globular, opening well, of irreproachable form and appearance. Clear rose, very fresh!

30. *Semiramis*.—Flowers full, globular, good form and appearance. Tender flesh rose.

31. *Souvenir d'une Mère*.—Vigorous. Flowers full, flat, large petals; tender rose at the outside, centre lively cerise. Very fragrant.

Notwithstanding the wonderful description given of 29, the former productions of Touvais have not given me much confidence in looking for anything very wonderful from him, for I do not know any Rose of his that is now a general favourite.

TEOULLARD.

32. *Baptiste Desportes*.—Vigorous. Flowers large, full, and well formed. Lively shaded red.

33. *Constant Lussan*.—Vigorous. Flowers medium full, well formed. Beautiful clear red, passing into violet.

34. *L'Abbé Laury*.—Vigorous. Full, well formed. Lively red, shaded.

35. *Loide de Falloux*.—Vigorous. Flower large, full, well formed. Blush white.

36. *Madame André Leroy*.—Vigorous. Nearly full, well formed. Salmon rose.

M. Trouillard is the foreman of the well-known nurseryman M. André Leroy, of Angers, and has been for many years known as a Rose raiser, although his flowers have generally come to us through Mr. Standish, of Ascot, who has purchased generally the stock, but finding, as I believe, that they were not generally up to the mark, he has given this up, and hence M. Trouillard comes out on his own account. His flowers generally want fullness of shape, and of those which Mr. Standish has let out belonging to him, there is hardly a flower, save Eugène Appert, that has risen to the position of a general favourite, and that sadly wants regularity of form, the outline being very imperfect, while André Desportes, Reynolds Hole, Madame Standish, Marguerite Appert, and others, must be numbered, I fear, amongst the things of the past.

OGER.

37. *Belle Normande*.—Vigorous. Very large, globular, tender rose, silver shaded. A sport of La Reine.

38. *Général de Maudot*.—Vigorous. Flowers large, full, and globular. Velvety purplish red.

39. *Marie Boissée*.—Vigorous and very free-flowering, well formed. Blush rose, passing to pure white.

DUCHER.

40. *Marie Perrachon*.—Moderate growth. Flowers large, full, imbricated. Violet shaded purple.

41. *Rosa Mundi*.—Full, vigorous. Flowers very large, well formed, virgin rose.

42. *Vase d'Election*.—Moderately vigorous. Flowers very large, very full, cupped, well formed. Clear rose.

MOREAU.

43. *Adelaide de Savoie*.—Flowers medium, capped, well formed. Tender satiny rose.

44. *Edouard Ory*.—Flower full, globular. Beautiful vermillion red.

45. *Prince Eugène de Beauharnais*.—Vigorous. Flowers large, well formed. Clear red, reflexed with purple.

46. *Telemachus*.—Flowers medium, flat. Velvety purple, strongly shaded with red.

FONTAINE.

47. *Madame Léonie Persin*.—Very vigorous. Flowers large, full, globular, well formed. Pale bluish.

48. *Mons. Pierson*.—Very vigorous. Flowers large, full, well formed. Amaranth rose, flushed with crimson.

49. *Roi d'Espagne*.—Vigorous. Flowers large, full, well formed. Clear red, reflected with purple.

50. *Rosine Ravanne*.—Vigorous. Flowers large, full, well formed. Lovely rose. The edge of the petals silvery.

DAMAZIN.

51. *Jules Lavey*.—Very vigorous. Flowers large, full, well formed, beautiful flesh rose, very glossy, and very free-flowering.

52. *Ninon de Pontbriand*.—Plant very vigorous. Flowers full, very large, well formed. Brownish crimson, shaded with carmine.

I cannot say that I entertain any very high opinion of the above Roses, and simply for the manner in which the raisers have deluded us in former years. It may be they will not do so now, but a burnt child dreads the fire, and we must wait to see. I hope to conclude the lists next week.—D., Deal.

AGRICULTURAL HALL CHRYSANTHEMUM SHOW.

THE Metropolitan Chrysanthemum Society held their annual Show at the Agricultural Hall, on Wednesday, Thursday, and Friday last, when the exhibitors were numerous, the display extensive and fine, and the attendance of visitors good, notwithstanding the very unfavourable weather which prevailed on the first two days. Last year the mistake was made of extending the Exhibition over too wide an area by which the effect was seriously impaired, most wisely, therefore, the attempt was not made to fill the acres of covered-in space which the Agricultural Hall affords, but the Show was confined to the minor hall, Lower Road entrance, and part of the adjoining area. The result was, that the effect of the display was much enhanced, and the innumerable blooms—red, white, yellow, and a host of intermediate shades, especially when viewed by gaslight, combined to form a brilliant scene.

There were upwards of forty classes—classes for nurserymen, classes for gentlemen's gardeners, classes for amateurs, classes for Islington, and classes that were open to all. With but few exceptions there was competition in all, and in many of them as many as four or five prizes were awarded. We would here suggest what we consider would be an improvement—namely, instead of having five classes numbered 1, and a like number distinguished as 2, and so on, to have them all numbered consecutively from first to last, and this, without interfering with the sections as at present constituted, would prevent all danger of confusion and mistake.

LARGE-FLOWERING PLANTS.—Of these Alma, Prince Albert, Lady Hardinge, Christine, Golden Christine, Annie Salter, Arigema, Defiance, and Jewess were the kinds principally shown. In the Nurserymen's Classes, Mr. Forsyth carried off the principal prizes; his specimens were noticeable for their fine bushy growth and abundance of bloom. He likewise took the first prize in the Open Class for the best single specimen, with a magnificent plant of Christine; Mr. D. Monk being second with a very fine plant of the same kind. A group comprising excellent specimens both of large-flowering kinds and Pompons, was also contributed by Mr. Forsyth. Among the latter were several fine close-headed standards with three-foot stems, which had been grown from cuttings put in last March. In the Gardeners' Class for six, Mr. D. Monk, gardener to J. Leachall, Esq., Page Green, was first with a splendid plant of White Christine, 4 feet across, and bearing, probably, not less than two hundred blooms; Defiance, usually starry, but not so in this instance; Golden Christine, Annie Salter, Alma, and Beauté du Nord. Mr. Ward, gardener to W. Fowler, Esq., Tottenham; and Mr. Glover, gardener to E. Lepage, Esq., Tulsa Hill, were second and third, with excellent specimens. Mr. Monk was first for three, with Golden Eagle; Annie Salter, beautiful; and Sparkler, red and orange, very full of bloom. Mr. J. Glover was second; Mr. Beecher third; and Mr. George fourth. Mr. Parker, Stratford, had Golden Christine, very fine; and we noticed a group of tall plants in fine bloom from Mr. Orson, including Jardin des Plantes, Beverley, General Hardinge, &c., bearing large and fine blooms. Excellent groups were also furnished by Messrs. Rowe & Glover.

POMPONS.—Of these Mr. Forsyth contributed several very

fine specimens grown in a more natural style than that which almost universally prevailed two or three years ago; his specimens, instead of being trained out almost flat on wire, had rounded heads; among these Lilac and Golden Cedo Nulli were remarkable for their size and abundance of bloom. The exhibitions of Messrs. Ward, Beecher, Bolton, Parker, Glover, and others, included many beautiful examples of Général Canrobert, Golden Cedo Nulli, Golden Circle (a fine new yellow), Lilac Cedo Nulli, Andromeda, Salomon, Daruffet, and Lilac Cedo Nulli. From Mr. Butcher came six nice pyramids, of which Général Canrobert, Cedo Nulli, and Golden Cedo Nulli, were covered with bloom.

CUT BLOOMS.—These were very numerous exhibited, and for the most part in great perfection. To attempt to give the names of all the varieties in each of the different stands in upwards of twenty classes, would be attended with little if any benefit; and we will, therefore, only notice the kinds that were principally shown. Among Whites were splendid examples of Mrs. W. Holborn, Beverley, White Globe, Empress of India, and Lady St. Clair. Among Yellows, Jardin des Plantes stood pre-eminent, and in many of the stands was of extraordinary size; of Orange, Bernard Paliessy, Antonelli, Golden Hermione, and General Bainbridge, a new and very fine orange anther; of Red shades, Lord Ranslagh, St. Patrick, Nil Desperandum, Oliver Cromwell, Rev. Joshua Dix, new orange red; Sir Stafford Carey, also new, a brown chestnut tipped with gold; of Rose, Lilac, Bush, &c., Queen of England, Alfred Salter, Arigema, Thania, Hermione, Beauty, Lady Slade, and Her Majesty. For twenty-four, first prizes were taken by Messrs. Monk, Merry, and Hilleary; and second prizes by Messrs. Forsyth, Slade, and Rowe. For twelve, first prizes by Messrs. Moxham, Monk, Robinson, and Saltmarsh; and second prizes by Messrs. James, Rowe, and Delvalle. For six, first prizes by Messrs. Delvalle, and Monk, of Chelmsford; and second prizes by Messrs. Howe and J. Monk. Besides the above there were classes for thirty-six blooms of twelve varieties shown along with the foliage, in which many splendid flowers were seen, especially in the stands of Mr. Forsyth, Mr. Allway, who had Jardin des Plantes magnificent, Mr. Butt, and Mr. S. Monk.

In addition to the above, numerous other prizes were awarded in the various classes to Messrs. James, Moxham, Robinson, Peasgood, George, Ward, Rowe, Brown, and others.

Of new varieties of the current year, we noticed Robert James, a finely incurved cinnamon and orange; Prince Alfred; Princess of Wales, a beautiful white, tinged more or less with lilac; Rev. Joshua Dix; and General Bainbridge, dark orange anther. For the latter, special prizes, offered by Mr. Salter, were awarded to Messrs. Moxham and Rowe. Princess Dagmar, a large-flowered Pompon Anemone, which was shown at Stoke Newington, was again exhibited by Mr. George. Two promising Anemone seedlings, Gem of the Valley, bush; and Prince of Anemones, shaded lilac, came from Mr. Brown, of Great Marlow. Large-flowering Anemone varieties, consisting chiefly of Gluck, orange; Louis Bonamy, lilac; Lady Margaret, white; Madame Godereau, sulphur; and Marguerite d'Anjou, nankin, were well shown by Messrs. Hilleary, Butt, Saltmarsh, Ward, Monk, Merry, Moxham, Forsyth, Massey, France, and others, most of whom also contributed extensive collections of Anemone Pompons.

Prizes were offered by A. Smee, Esq., for the best collection of Chrysanthemum flowers, intermixed with Ferns or other foliage, for the decoration of the dinner-table, and a pretty design from S. Hill, Highgate, stood first. It consisted of a glass stand, with Begonia leaves, interspersed with Adiantum, and Chrysanthemum blooms at the base, and the top dish, edged with Isoplepis gracefully hanging down, and filled with Chrysanthemum blooms. Mr. George was second, with a design somewhat resembling the preceding. For the decoration of the Hall, the walls of which were hung with swags of foliage and flowers, Mr. Williams contributed a number of choice ornamental-foliaged plants, &c.

BIRMINGHAM CHRYSANTHEMUM SHOW.—The Handsworth Floral and Horticultural Society propose to hold their third great annual Exhibition of Fruit and Chrysanthemums at

the Birmingham Town Hall, simultaneously with the Poultry and Dog Shows. The two previous displays which have taken place in Birmingham, were not only extensive, but beautiful; and there is every reason to anticipate that the one now about to take place will be greatly superior to them.

TRENTHAM BLACK GRAPE.

In your issue of the 8th inst., Mr. J. R. Pearson strongly recommends the Trentham Black Grape for an orchard-house. Has he grown it in a cool house? He says, "In the hothouse the Trentham Black is a first-rate early Grape. We cut about 40 lbs. from a young Vine this season, &c." We have one Vine of Trentham Black in an orchard-house, and as far as I can judge it is not at all desirable for that position, being a bad setter; scarcely two-thirds of the berries swell to their proper size, being stoneless. The remainder are large oval-shaped berries, with a thin skin of a bluish black colour, flavour excellent, superior to any Hamburgh, and good bunch; but being a bad setter must detract much from the value for an orchard-house. I have no doubt it is good in heat. The berries grew uniformly to the size of peas, when they were thinned, and there they remained until colouring, when they reached the monstrous size of a Black Cluster. The few which grew on are the size of a good Muscat of Alexandria. The Vine was supplied by a highly respectable firm, and I have no doubt about its correctness. Should I be in fault and not the Grape, I shall be very happy to be placed on the right footing. In Mr. W. Paul's notes on his tested varieties, he places Trentham in a doubtful position, and so do I. Black Hamburgh by its side is superb.—GEORGE BESTER.

[We should be obliged by having the results of the experience of other correspondents upon this point.—Eds.]

PILLAR ROSES IN A CONSERVATORY.

I HAVE read with great delight the account of Enville Hall and its extensive gardens and pleasure grounds. There seems to be everything that heart could wish, but one thing. A conservatory is spoken of. I do not know its construction. If there are two lines of pillars and a broad walk between, as Lord and Lady Stamford are fond of Roses, especially of Tea-scented Roses, I think that they would be delighted with Tea-scented Noisettes, strong-growing Tea Roses, strong-growing Bourbons, and Hybrid Perpetuals, planted so as to run up the pillars. I cannot conceive anything in the Rose way that would be more transcendental. I give a list of Roses that would be well adapted to such a purpose. If I were a rich man I would build a long glass house, say 300 feet in length, if it were only for this purpose. The other part of the house might be filled up with trees in pots, or with Tea and other Roses, either in pots or planted out. There is nothing in the Rose way that will surpass for abundance and continuity of blooming the Tea-scented Noisettes against south walls out of doors, or Tea Roses and Tea Noisettes under glass.

TEA ROSES, Light Colours.—Devoniensis, Sombreuil, Madame Willmox.

TEA-SCENTED NOISSETTES, Yellow Roses.—Cloth of Gold, Solfaterre, Triomphe de Rennes, Gloire de Dijon, Celine Forestier, Lamarque, Mdle. Aristide, called also Madame Schultz.

These are splendid Roses for such a purpose. If more yellow Roses are desired, the two Tea-scented Noisettes Isabella Gray and Jean Hardy, and the four Tea Roses Elise Sauvage, Vicomtesse de Cazes, Louise de Savoie, and Safrano, may be added to the others.

BOURBONS, Light Colours.—Acidalie, Souvenir de la Malmaison. **Light Crimson.**—Sir Joseph Paxton.

HYBRID PERPETUALS, Very Dark.—Prince Camille de Rohan, Duc de Cazes, Princesse Mathilde. These are strong growers, beautiful, and never out of bloom.

Rose Colours.—Anna Alexieff, Baronne Prevost, La Ville de St. Denis, Duchesse de Cambacères, Madame Boll.

Blush.—Caroline de Sansal.

Shades of Crimson.—Jules Margottin, Madame Louise Carique, Duc de Rohan, Maurice Bernardin, Maréchal Vaillant,

Madame Julie Daran, Sénateur Vaisse, Général Jacqueminot, Madame C. Crapelet, General Washington, Monsieur de Montigny, Géant des Batailles.

These are all fine Roses, and adapted to the purpose. Moreover, with the exception of Safrano, Mdle. Aristide, and Princesse Mathilde, they are all show Roses. Some of the Roses named are strong-enough growers to run up a pillar of any height, and meet one another in the form of an arch—namely, Gloire de Dijon, Cloth of Gold, Solfaterre, Lamarque, Triomphe de Rennes, Mdle. Aristide, Acidalie, Souvenir de Malmaison, Sir J. Paxton, Madame Louise Carique, the best H.P. climber, and Duc de Cazes, the best dark climber. The pillars might be planted with three plants of similar growth and habit, in contrast of colours if so desired.

I am not much for mixing colours, but rather for condensation. As regards climbing Roses, it is not every Rose that will run up a pillar that will fulfil all the conditions of a pillar Rose. A pillar Rose to be first-rate, as a tree, should cover its stalks with flowers and leaves. Probably no trees fulfil this condition better than Ophirie, Mdle. Aristide, Anna Alexieff, and Madame Louise Carique. One thing is plain, that persons should be careful not to cut away the wood from the base and centre of strong growers. In due time, under any circumstances, they will become bare. In such case they must be cut down and let up again. I am persuaded that any person trying the above plan, and selecting any, or using all the Roses named, for the purpose stated, will be highly delighted.

I have just received a letter from Mr. W. Paul, in which he informs me of the distinguished names of the members of the Horticultural Club who drank my health enthusiastically on my birthday, Nov. 8th. I embrace this opportunity of thanking them—thanking them heartily.—W. F. RADOLFF, Rushton.

CULTURE OF TRITONIA AUREA.

I SEE that a correspondent is advised in a recent Number of the Journal to keep the Tritonia aurea dry at one time, as being a bulb requiring rest.

Confident that the above is not the treatment which may be most successfully followed, I am induced to make the few following remarks upon a successful mode of culture.

The Tritonia aurea is strictly an evergreen bulb, and should be treated in practice as such. Immediately the plants have done flowering, and the foliage is showing signs of ripening, cut them down, and pot them as advised; after which give them a good soaking of water, and do not let them become dry until they again show signs of flower, when they will not need so copious a supply as when growing vigorously. They require a rather liberal shift to grow them well, or they may be carefully divided. When potting them, it will be seen that at least two, and in some cases three, underground growths have started from each of the bulbs; to encourage these with water, &c., will be to insure to each a good strong flower-spike from 2 to 3 feet in height; whilst to dry them at all at this period will be to arrest their growth, and dependance must then be placed on the old bulbs alone, which these strong growths from the base of each have already so greatly impoverished. This is the cause of the many poor-looking pots we often meet with averaging from 7 to 9 inches high, and with very little flower.—W. EARLEY, Digneval.

[The Tritonia aurea with us dies down completely once annually a short time after blooming, and there is no green shoot then for some weeks to indicate its evergreen character. We were in the habit of considering such bulbs strictly deciduous, and we did not know that continued root-growth without visible foliage constituted what we recognise as an evergreen, be it ligneous or herbaceous. It may be so: then all plants are such; for there is none that does not increase at root while in a state of rest more or less before the reappearance of the foliage.]

We are well aware of the fact that it is extremely injurious to keep the roots of Sparaxis, Tritonias, &c., at any period in a dry state for a length of time, either when growing or in a state of rest; but the idea that the Tritonia aurea requires to be kept constantly growing is not correct;

for there is no plant that can be kept healthy without an annual period of rest, whether that rest be effected through dryness or through cold.

According to our correspondent's description of his treatment it would seem that he treats the Tritonia as an aquatic during the winter, lessening the quantity of water when the plant shows for bloom, when it seems it should be allowed to become dry, or not be watered so copiously as when growing vigorously during the winter. Surely a blooming plant should be well watered when showing for and in flower!

We pot them, when the foliage turns yellow, in soil moderately moist, and place on coal ashes out of doors—it may be in a frame. When the flower-spikes are quite gone we cut them away, and we do not pot until then, if any increase is desired; and after potting new roots we water them to settle the earth about the roots. We plunge them, whether divided or undivided, in coal ashes in a cold frame in October, before frost sets in. Air is daily given during mild weather, and a protection of mats sufficient to prevent injury from frost. No water is given during the winter, from October to March, for there is moisture enough in cold pits, and cold greenhouses too, to prevent the young shoots, as yet under ground, deriving their sole support from the root-bulbs. Were they watered as our correspondent recommends, and should they be frozen with the soil in the state of mud, as it will be through constant watering, we should find the roots as if parboiled—those young shoots our correspondent is so careful about as to give soakings of water to. After growth has fairly commenced in the spring we water copiously, and continue to do so until the flowering is passed, when the plants are repotted, and treated to no more water or moisture than what they receive by being placed or plunged in coal ashes. So opposite is this to the treatment recommended by our correspondent that we have entered into it at length, not to show that he is wrong, but to prove that circumstances alter cases; and in answering correspondents' queries special cases are the rule rather than the exception, and no one can form an opinion of the answers unless the query be before him. We have another mode of treatment, different only because the plants are wintered in a heated structure, and this consists in our keeping the pots on the floor in the coolest part of the structure, and with the moisture absorbed from the damp floor, very little water is necessary to prevent the soil becoming dust dry, but if it should become very dry we give a little to prevent the roots drying up. We keep them dry, but not dust dry, and the result is we have our plants with 178 spikes of bloom, about 4 feet through, and between 3 and 4 feet high, and not those miserable things which our correspondent speaks of. Such are produced by an undue excitement in winter, and the discontinuance of water before the foliage is properly matured, and the latter is so much preyed on by red spider as to form imperfect roots, resulting in weak growths in the following season.—G. A.]

THE CHASSELAS VIBERT GRAPE.

This Grape requires to be well grown, and then few can beat it. It ripens early, and the berries are very large, round, and of an amber colour, and the flavour that of the Sweetwater. I have twice carried off prizes at the Crystal Palace with this Grape, the first year a first prize, and the following year a second. The roof of my orchard-house (2400 square feet), has been for some time covered with the finest ripe Grapes; the rods were introduced into the house about the end of April, the Peaches and Nectarines having been sufficiently forwarded by heat, so as not to be injured by the shade of the Vines; forty-eight dozen of Peaches and Nectarines were gathered in one day, and the flavour was excellent.—A CONSTANT READER.

LARGE CUCUMBER CROP.—It is estimated by men who have facilities for ascertaining the truth that there have been salted this year in West Chester County not less than 100,000,000 of Cucumbers. Besides this, some producers have sent their entire crops to the city, right from the field. We know that a great many tons of Cucumbers have

been sent down on the New Haven, Harlem and Hudson River Roads, and many by boats, so that we do not think we are over-estimating the production of Cucumbers this year in West Chester Co., New York, at 130,000,000, or 1,300,000 dols., cash value.—(*American Tribune*.)

HOW MY PRIZE HYACINTHS WERE GROWN.

It may seem presumptuous for an amateur of not many years standing to lecture the whole gardening community on the cultivation and management of the Hyacinth; but as my flowers have been more than once prizetakers, I am about to commit the results of my experience to paper. Great numbers can only be well grown by nurserymen who grow them not only for general decorative purposes but for sale. The better way, in my opinion, is to make a selection of sorts that turn out invariably good, and grow two or three of each. Competitors, if they wish to have uniform stands of choice spikes, must grow a few of each sort. When I first began cultivating them I did very many foolish things, which told much against the production of fine spikes, but fortunately I was much easier satisfied then than now, and I persevered, and with a degree of success which I never anticipated. In my eagerness to have finely developed flower-spikes and flowers, I sought information from the most trustworthy sources. I read up all the articles that I could find bearing upon their cultivation, and what with feeling my way, and using a little common sense, I overcame many of the little difficulties that first prevented my success. I thought at first that large pots and very rich compost were absolutely necessary, and having furnished these things I watered the soil very freely—having reasoned within my own mind that, as they sometimes were grown in water alone (in glasses), the earth must be saturated upon the same plan. As a matter of course, I lost a few altogether, and the remainder only languished out a miserable existence, producing mere abortions of flower-spikes, and ill-coloured, substanceless flowers. A little more reflection might have taught me differently, but it is astonishing how very foolish and unpractical many people are who have their business engrossing their attention all day, and little time left for indulging in any favourite whim. I was considerably mortified at seeing such a grand array of well-managed flowers at the shows in Glasgow and Edinburgh, and determined, there and then, to state exactly how I had treated my bulbs to one or two good gardeners that I knew, and solicit their advice for future treatment. As doctors differ in their prescriptions so do gardeners seemingly; for one advised me one thing and another another thing; and although both modes might be productive of equally good effects, their conflicting opinions had rather a tendency to confuse me. However, I managed to get hold of some fine yellow turfy loam full of vegetable fibre; and out of that heap, which I have carefully preserved under a wooden shed, I grow my prize Hyacinths. I introduced a little river sand, and a very little pigeon dung, the ammonia from which imparts a beautiful dark green to the foliage. I use seven-inch pots with wide holes at bottom, so that strong-growing sorts may have an extra benefit in the potfuls of soil. I plunge them, preparatory to their removal to a fine low-built pit I have for preserving a few choice things over winter. I bury the bulb all but out of sight in the pot when planting, I then place the pots in a two-light frame within 18 inches or 2 feet of the glass, and take care to have all my sorts placed together, the larger bulbs at the back, and the smaller ones at the front, so that I may see at a glance how they grow. Just now they are all in such a place; and from the state of the roots when planted. I have great hopes of coming in among the winning competitors next season. I give no air or ventilation for the first two months; but as soon as the crowns begin to get properly developed, I admit it freely on fine sunny days. I only take up a few of the worst for forcing, reserving the greater portion of my stock for the two grand field days in the east and in the west. I study the time for having the flowers fully open by the middle of March, and by adopting the cold-frame treatment, and taking them afterwards into my pit at the beginning of February, they neither require retarding nor forcing to have them in time for the days appointed for the great shows. I find that it is a bad plan for a competitor to

have to retard his spikes, as the foliage gets lengthy, and what professional gardeners call drawn, which tells very much against a show of otherwise good flowers. To force them is much better, but the best of all treatment in my experience is to allow them their own way. Do you know I cannot dress my spikes as I see some done, and I am a little put out about it; for doubtless a fine pyramidal spike with flowers looking you straight in the face, and regularly placed all round is what is most admired. I wish some of your able correspondents would advise me in this particular, I like to attend to and master everything I take in hand. My frame is now filled with

4 Lord Wellington.
3 General Maveleck.
4 Prince Albert.
2 Mimosa.
2 Général Pezassier.
3 Alba Superbissima.
3 Orondates.
4 Mont Blanc.
2 Snowball.
1 Queen of the Netherlands.
1 La Tour d'Auvergne (forcing).
2 Madame Van der Hoop.

4 Charles Dickens.
3 Laurens Kester.
3 Van Speyk.
2 Bloksberg.
3 Grandeur à Merveille.
4 Macanlay.
3 General Cavaignac.
2 Mrs. B. Stowe.
2 Monsieur d'Faesch.
4 Von Schiller.
2 Koh-J-Noor.
3 Canning.

—“ALIGUI.”—(*West of Scotland Horticultural Magazine.*)

CULTIVATION OF THE MELON.

(Continued from page 293.)

MELONS IN HOUSES.

In houses the Melon requires the same conditions of soil, temperature, moisture, &c., though different in their application, and that difference I will now dispose of.

Presuming that there is not a hotbed constantly at work, there should be provided a small box, 3 feet by 2 feet, and about 1 foot deep, after the manner of a garden frame, and this placed on a foot of rubble over a hot-water pipe, and as near the glass as practicable, will form an excellent place to raise seedlings. The frame should, of course, have a glass covering, and if in making it little wood is employed in proportion to the glass it could not be made better; for young plants, especially young Melons, cannot have too much light. The glass covering should either be moveable, or fixed on hinges, so that it can be raised at will for the purpose of admitting air, or examining the plants. The rubble may be covered with 6 inches of tan, in which to plunge the pots, and this should be heated sufficiently to afford a bottom heat of 85°, and a top heat of from 70° to 80°. These conditions having been secured, the seeds should be sown singly in 60-sized pots in the compost already mentioned, which should be in a moderately dry condition, as if wet the seeds are apt to rot instead of germinating, especially if old seed is sown. A certain degree of moisture is necessary to germination; the soil should therefore be moist, but not soddened with water. The seeds should be covered about a quarter of an inch deep, and if the soil be moist no water will be needed at the time of sowing. Shut the frame closely, and keep it so until the plants appear, this they will do in a week, or less. When the cotyledons or seed leaves appear admit a little air, and give some water if necessary, but not too much, or the plants will damp off at the surface. Be very careful not to let the plants become drawn at this stage; any symptoms of this are to be immediately checked by tilting the light more, and if this does not effect the object, remove it altogether. When the plants show their rough leaves pot them in 24's, sufficiently low that the stem may be covered with soil to within an inch of the seed leaves. The soil for potting should be placed within the frame for forty-eight hours, in order that it may be of the same temperature as that in which the plants were previously. Give water sparingly, but whenever necessary, and then at the same temperature as the frame hotbed, which should now be from 80° to 85°. The plunging material should be kept moist, and the evaporation from it will be sufficient for the foliage at this early stage.

After two rough leaves have been made it must be decided whether the plants are wanted with a stem or not. If the trellis on which they are to be trained is within a few inches of the soil in which they are soon to be planted no

stem is necessary; the leading point is therefore pinched out; but if a foot or more above it, the leading shoot must then be allowed to grow, removing, by rubbing off close, the side shoots formed along its stem until the required height is reached, when it should be stopped. This should not, however, be done until the plant is turned out, and not then if the trellis is 6 feet or more in width. If the vines are to be trained on the soil the plants should be stopped at the second rough leaf, and be treated in respect to training precisely the same as Melons in dung-frames.

When the plants are potted, the house in which they are to be planted should be made ready for their reception. The walls should be thoroughly washed with lime, mixing a pound of sulphur with each gallon of lime wash. If the old soil is not yet removed, it must all be taken away, and replaced with fresh, but only sufficient to raise at the place of planting a hillock of the required height. In putting on the soil it is necessary to see that the rubble over the pipes, tanks, &c., is not choked with soil, and if this is the case it must be riddled to free it of the dirt. The depth of rubble over hot-water pipes should in no case be less than 6 inches, whilst an inch will do over tanks. To prevent the rubble becoming choked with soil, a layer of turf an inch thick (charred to free it of wireworms) will be of service. On this place about 3 inches of soil, and then the hills may be raised in their proper positions, which will be, as a matter of course, at the lowest part of the trellis. The soil should not be wet, neither should it be dry, but healthfully moist. The house by the time of planting-out should have a temperature of from 70° to 75°, without sun heat, and the temperature of the soil should not be less than 80° or 85° at bottom, and 80° within the hillock. This should be double the size of those usually placed in frames on dung hotbeds, and the depth of cavity for soil must be equal to 1 foot for each foot of trellis to be covered. Borders of soil, however, 3 feet wide and 1 foot deep, will support plants covering a trellis 6 feet wide, by surface-dressings of manure. This being done the house should be sprinkled with water so as to create a moist atmosphere, and it is well to admit air, and shut up for a few days prior to planting-out, so as to have a sweet and pure atmosphere. It is well, too, if the woodwork need painting, to have this done whilst the house or pit is empty, and all needful repairs should be done at the same time.

These conditions secured the plants should be planted when they are of sufficient size to reach the trellis. The distance apart is dependant on the width of the trellis. If it is 4 feet wide put one plant under each light, but if 5 feet wide let them be 2½ feet apart, whilst for a six-foot trellis they should be 2 feet apart. The trellis should be near the glass, the most suitable distance, in my opinion, is 8 or 9 inches. If nearer the leaves are liable to be scorched, especially when wet, and spotted in consequence, and if at a greater distance they invariably have long foot-stalks, which are very undesirable. After planting give a gentle watering, and maintain a night temperature of 70°, with a rise of 5° or 10° without sun, but of 10°, 15°, or even 20°, with sun, admitting air at 80°, and shutting up early with the thermometer at 85°. Every available surface should be sprinkled with water of the same temperature as the house, between 8 and 9 A.M., and again at shutting-up, at 3 or 4 P.M.

At planting the vines should be tied loosely to the trellis at their proper distances apart—that is, if planted 3 feet apart, there should be three shoots 1 foot apart; if at 2½ feet a like number at as nearly equal distances as possible; if 2 feet, two shoots, which we obtain by stopping; and if the trellis is 6 feet or more in width, we have but one shoot from a plant. Whether there be one or more shoots retained to train in at a foot apart (and these should be the strongest, and the trellis close to the ground), we do not stop the shoots, but rub out all besides them, and train to the upper side of the trellis, keeping them well tied down, but leaving sufficient room in tying to allow of the shoots growing. These are allowed to advance without stopping, until they reach to within 6 inches of the width of the trellis. The point of each is then taken out, and we have laterals already emitted at the base, more to come at the top, and the lower ones to be rendered more vigorous by stopping the leading shoot. These laterals will proceed right and left of the main shoot or stem, as we will now term it, and on them the fruit is expected to appear at the second or

third joint. If so, we stop it when the flower is sufficiently expanded for impregnation, twenty-four hours after which we take out the point of the shoot one joint above the fruit. In consequence of this stopping the sap, instead of finding its way into the growing point, will be directed into the leaf, at the axil of which is the fruit, and it will hasten swelling, or speedily cause the protrusion of another shoot, just as the fruit is set or not. If the fruit swell well, and we have two on a plant, every shoot is kept stopped close to one joint, and some of the weakest laterals are removed, encouraging any shoot, however, that may come above or from the same point with the fruit; for we want to draw the sap from the other parts of the plant towards the fruit, its size being dependant on the sap elaborated in the leaves above and by it.

The fruit being set every encouragement is given to insure its swelling by keeping the foliage healthy and stopping the laterals, which should be kept thinned out so as to prevent the principal leaves being unduly crowded, and deprived of light and air. After the fruit is set the new growths should not be allowed to make much way, for every inch of new growth diminishes the size and deteriorates the quality of the fruit; at the same time it is important to keep up a healthy root-action, and this can only be done by promoting growth to a certain extent. The young shoots must, therefore, be stopped by taking out the points, never allowing more than two joints above the last stopping after the fruit is set. The plants, to do them justice, should be gone over at least once a-week, stopping new growths, thinning out those which are weak and ill placed, and regulating those left so that every part may receive its due share of light and air. It is all-important to tie up such shoots as require it before they become twisted by hanging down or grow out of place, for no amount of tying afterwards will compensate for a broken twisted stem. It is a very common but a very bad practice to allow Melons to completely cover the trellis before any pruning is thought of, and then it is given with great severity, and the consequences to the plant are bad. I say it is the worst of systems to allow a Melon, after setting its fruit, to grow, without stopping and thinning the shoots at intervals of not more than a week, until the shoots become entangled and the leaves are struggling to gain a due share of light. It is usual in this state of things to thin out the shoots, shortening those left to a few joints from whence they proceed, doing the same work then that ought to have been done ten days or a fortnight previously. Direful are the consequences. The balance between the roots and the leaves is gone. The roots take up the food from the earth, but the leaves left are imperfectly formed through the lack of light, air, and room to expand, and are unable to assimilate the food absorbed, or do so in an imperfect manner. In a few days a gummy exudation takes place from the cut parts, and they very often split open; besides, all along the stem a jelly-like exudation takes place, especially if the atmosphere is at all moist, and the consequence of this again is a diseased state of the plant. It was expected, no doubt, that the removal would cause a greater amount of nutriment to be thrown into the fruit. Never was a more mistaken notion. The leaves are the true source of the increase of the size of the fruit, and this depends on the assimilation of the food absorbed, and not on that actually taken up by the roots; for, no matter what may be the amount of food collected by the spongioles, unless there be a corresponding amount of the organs necessary for its assimilation, the fruit will not swell the more but remain at a standstill. The leaves formed in a crowded state of the plant are imperfect through the absence of light and air, and being suddenly exposed to increased light are incapable of bearing the change, they therefore become yellow-spotted, and unable to perform their ordinary functions and elaborate the greater amount of food impelled into them in consequence of the removal of the young growths in so wholesale a manner. In brief, the foliage assumes a sickly hue, falls a prey to red spider, new growths are put forth tardily and are weak, the fruit does not swell, but its rind is rendered hard as flint, and the plant is all over wounds and sores. In a short time there is a reaction, growth recommences, and the fruit is expected to swell. Perhaps it has begun to net; it would ripen if the growths were kept down, but it is small and it may yet swell. Swell, it does, but its rind is

incapable of expanding, and it bursts through the pressure from within.

All stopping and thinning of the shoots after the fruit is set should be confined to stopping the young shoots as they present themselves to one, or at most two leaves, and removing such shoots as have a tendency to deprive the principal leaves of their due share of light and air; but this must be done proportionately with the increased growth in another part.

After the fruit becomes fully netted all over, all growths whatever should be stopped to one joint, and the shoots gradually reduced in number in order to admit more light to the leaves and to bring the plant into a state of maturity, which is necessary to obtain full-flavoured fruit. Second crops from plants in houses are not worth trying for; therefore, a matured state of the plant is desirable by the time the fruit is nearly ripe.

If the first laterals or side-shoots do not show fruit, or if they do and it fail to set, these shoots, being stopped two joints above the embryo fruit, will push sub-laterals, most of which will show fruit; but before this every other lateral or side shoot must be removed, and this gives increased room for the development of the new parts. We may then reasonably calculate on the appearance of three or more embryo fruits from each lateral, and the sub-laterals should be stopped at one joint above the fruit. Duly impregnated it is hardly possible but that more fruit by half will be set than are really required. After the fruit begin to swell, two of the most promising on each plant are retained, and a number of the sub-laterals may be removed and new growths stopped, taking off more sub-laterals, providing always new growths are made to keep up the balance between the roots and leaves. It is best, however, when the growths are few and the parts already formed which have to be removed distant, for such a state shows that the plant has all its vital forces concentrated on the perfection of its fruit.

Should neither the laterals nor sub-laterals show fruit, which rarely happens under fair management, the old laterals may be cut clean out provided there be young shoots formed near the stem to take their place, when they are to be treated in the same manner as their predecessors. If there is not a sufficiency of young shoots to take the place of the barren laterals, a shoot may be trained from the base of the principal shoot, and the old shoot ultimately cut away to make way for the young one. Such will fruit most freely, but the fruit produced will not be equal to that furnished by a more vigorous plant.

When the fruit begins to swell it will need supporting, which I prefer doing by fastening a string of bast to the trellis and bringing it under the neck of the fruit so as to afford support and room for swelling, fastening the other end to the trellis. This will be sufficient until the fruit approaches maturity, when a strip of matting may be strung round the fruit, fastening it so that the latter cannot by any possibility fall on the ground, should it be allowed to remain on the plant until dead ripe, when it would throw itself off like a Peach. I consider the fruit is best cut a day or two after it commences to give forth its perfume, cutting it with a part of the foot-stalk attached. Such will keep much longer than fruit allowed to remain on the plant until dead ripe, and I fancy they are a trifle higher-flavoured, though not so highly perfumed. There are many methods of supporting the fruit of Melons, but none are equal to the ordinary tying process.

(To be continued.)

G. ARBRY.

PORTRAITS OF PLANTS, FLOWERS, AND FRUITS.

RENANTHERA LOWII (Mr. Low's Renanthera).—*Nat. ord.*, Orchidaceae. *Linn.*, Gynandria Diandria. Native of Borneo. This gigantic Orchid has the unique peculiarity of producing "two entirely distinct forms of flower on the same spike." The lowest pair of flowers in each spike are uniformly tawny yellow, dotted with crimson; the remainder are pale green, blotched with reddish brown.—(*Botanical Magazine*, t. 5475.)

MASEDEVALIA CIVILIS (Tufted Masdevallia).—*Nat. ord.*, Orchidaceae. *Linn.*, Gynandria Monandria. Native of Peru.

Stems grow in a tuft with, at the base, yellow flowers, spotted internally with purple.—(*Ibid.*, t. 5476.)

AQUILEGIA CORYMBOSA (Long-spurred Californian Columbine).—*Nat. ord.*, Ranunculaceae. *Linn.*, Polyandria Pentagynia. Native of the Rocky Mountains, California. Calyx blue, corolla white.—(*Ibid.*, t. 5477.)

MIMULUS LUTEUS var. **CUPREA** (Copper-coloured Yellow Monkey-Flower).—*Nat. ord.*, Scrophulariaceae. *Linn.*, Didynamia Angiospermia. Introduced by Messrs. Veitch from the Chilean Andes.—(*Ibid.*, t. 5478.)

VITIS MACROPUS (Gouty-stemmed Vine).—*Nat. ord.*, Ampelidaceae. *Linn.*, Tetrandria Monogynia. Native of South Benguela.—(*Ibid.*, t. 5479.)

ACHIMENES ROLLISONII.—It is a cross between *A. gloxiniflora*, and *A. Shearii*, raised by Messrs. Rollisson, Tooting Nursery. Colour purplish lavender, throat yellow spotted with purplish crimson.—(*Floral Magazine*, pl. 217.)

SWEET WILLIAM.—Two "Auricula-eyed" varieties raised by Mr. Hale, Stoke Pogis, near Slough.—(*Ibid.*, pl. 218.)

IRESENE HERBSTII.—Introduced by Mr. Herbst from Brazil. It is from 12 to 18 inches high. Stem and branches a beautiful, almost transparent carmine, leaves purplish crimson underneath, dark maroon on upper side, with its numerous ribs carmine.

"The plant coming both from Peru and the River Plate will no doubt stand our climate better than the *Coleus*, and I may add, that in my nursery-ground, in close vicinity to and almost on a level with the Thames, open to all winds and weathers, without trees or protecting walls, it stood uninjured the slight frost which occurred in August last, while the leaves of *Coleus Verschoffeltii* were entirely spoiled, and those of *C. nigricans* dropped off. I am persuaded that the *Iresine* will maintain a first place in every collection where plants are grown for decorative purposes, and I am informed that it will be largely planted next season in some of the most celebrated metropolitan gardens."—(*Ibid.*, pl. 219.)

RHODODENDRON, Princess Helena, raised by Messrs. Veitch and Son, Chelsea, from *R. jasminiflorum*, crossed by a scarlet species imported by them, but not sent out. Tubes of flowers very long, and the whole a delicate pink.—(*Ibid.*, pl. 220.)

PEAR, Vicar of Winkfield.—About 1760 this was found growing wild by M. Leroy, curé of Villiers, in Brenne, France. He propagated it, and it was soon dispersed through its native country under no less than sixteen different names, such as *Monsieur le Curé*, *Gros allongée*, &c.

"Judging from the number of instances in which I have specimens of this Pear sent me to be named, it is one that though very generally distributed is very little known. Though not a Pear of first-rate excellence as a dessert fruit, still it is one which on account of its handsome appearance deserves to be cultivated in every collection of any extent where the soil is deep, loamy, and warm. According as the soil is more or less so, will the fruit possess more or less merit; while it is sometimes a melting Pear of excellent quality, at others it is only fit for stewing.

"The fruit has a powerful musky scent when ripe, and is of the largest size. It is long, pyriform, and often one-sided; but the most distinguishing characteristic is, that the eye is not in a line with the axis, as in other Pears, but is frequently placed on one side, and generally on the side opposite to that on which the stalk is inserted; by this peculiarity alone this Pear may be identified. The skin is smooth, green at first but changing as it ripens to yellow, with a faint brownish tinge next the sun, and strewed with numerous grey, russet, and green dots. Eye small and open with long, spreading, leaf-like segments, placed either on a level with the surface, or set in a very shallow basin. Stalk from 1 to 1½ inch long, slender, and obliquely attached without depression, and frequently with a fleshy swelling at its base. Flesh white, juicy, melting, and sweet when grown in a warm situation, but only half-melting and coarse-grained under ordinary circumstances. When it does not ripen it is a very excellent stewing Pear. It is in use from November till January.

"This Pear derived the name by which it is known in England from having been introduced from France by the Rev. W. L. Rham, of Winkfield, Berkshire."—(*Floral and Pomologist*, iii., p. 241.)

WORK FOR THE WEEK.

KITCHEN GARDEN.

Artichokes, Globe, they should have a little loose litter laid round them for protection, more particularly as the continued mild weather induces them to grow more than is desirable at this season. **Asparagus**, take up roots for successional forcing, and if new beds are to be made now is the time to see about making them ready for spring planting. **Cabbages**, stir the surface of the soil amongst them, and also Lettuces in the open quarters, and give occasional dustings with lime. **Endive**, lay slates upon the plants, and cover up with leaves on the approach of frost. Do not forget to look over *Endive* and Lettuce in store, and remove all decaying matter. **Peas**, the beginning of the week will in most localities be a good time to make a moderate sowing of these, and also of Broad Beans. **Sea-kale**, cover up a succession, taking care to force very gently. Any plants not at present required for forcing should have the crowns covered with light dry soil, and then with partly decomposed leaves.

FRUIT GARDEN.

Planting young fruit trees, and transplanting or raising those of larger growth, must be vigorously prosecuted. The season is very favourable, and the earlier these operations are completed the greater is the chance of success. With all newly-planted fruit trees or shrubs mulching or top-dressing is of immense utility in shutting in, or rather arresting the departure of the remaining ground heat of the past summer, and imparting nutriment to the soil for the ensuing year. It ought to be well considered that the soil will gain no heat between this period and the end of February, but, on the contrary, a progressive loss must ensue for the next two months at least, unless we resort to the process of mulching. This proceeding is, we think, indispensable as connected with early autumn planting, whilst for Vine-borders, whether the Vines are intended to be forced early, or are bearing very late Grapes, the practice is equally necessary and important.

FLOWER GARDEN.

Alterations, planting, &c., will be carried out this autumn with much comfort as far as the weather is concerned; and those who have employed additional labour in these operations will have little to regret in the spring. All tender or half-hardy shrubs should have some protection planned forthwith, and especially the tender kinds of *Roses*. Standards of the latter may have a bunch of dry moss, or a wisp of hay or straw, or some dried fern, bound round the head, and the whole well fastened to a stake. Also get the stock of Briars for budding upon next year without delay, for unless they are planted before spring, they seldom furnish strong shoots for early budding. Many object to planting shrubs and trees in winter, believing that the roots if hurt at that season are liable to rot, and certainly early in the autumn is a much preferable period, but with weather like the present we would not delay such work a single day; and if the soil is properly prepared by draining, &c., where necessary, as should always be done before planting, there will be fewer failures from planting now than if the work were postponed to March. When, however, the ground to be planted is of a clayey nature, and in an unkind state at present, it will undoubtedly be better to defer planting until spring, meantime using every means to improve the state of the ground. Soils of this nature should always be dug or trenched some considerable time before planting, as neither drainage, nor anything but exposure to the action of the atmosphere, will bring them into a fit state for planting.

FORCING-FIT.

Dutch bulbs should be largely used for forcing at this season, and where hardy shrubs are being forced for the decoration of the conservatory, they should be brought into flower as soon as circumstances admit. Do not forget to introduce into gentle heat by degrees a good batch of *Roses*, choosing the most promising plants of *Teas*, *Bourbons*, and *Hybrid Perpetuals*, which are the best kinds for winter flowering. A gentle bottom heat will be of service to these, as also to most other plants subjected to heat, in order to make them flower early, and a moist state of the atmosphere must be secured, admitting a little air on every favourable opportunity. Double Roman *Narcissus*, *Crocuses*, *Neapolitan Violets*, *Mignonette*, and *Cyclamens* bloom early without

much forcing. Fire heat should be applied principally by day; the pit to be shut up early and night heat applied very cautiously indeed at this season. Apply frequent but very moderate fumigations of tobacco to destroy the green fly.

GREENHOUSE AND CONSERVATORY.

Damp or insects do irreparable injury to softwooded plants at this season, and these must be carefully attended to if they are to be wintered in first-rate order. Pelargoniums to be kept rather dry and cool, giving whatever water may be necessary in the mornings of fine days, so that the superfluous moisture may be removed before the evening, avoiding the use of fire heat except when necessary to prevent the temperature falling below 40°, or to dispel damp. Every decaying leaf to be instantly removed, and drip must be studiously avoided in these houses. Herbaceous Calceolarias require very similar treatment, except that they are very subject to the attacks of thrips unless afforded a moist atmosphere; they must, therefore, be narrowly watched and smoked lightly two or three evenings successively if this pest makes its appearance, keeping the atmosphere moist, and giving air on every favourable opportunity to prevent the foliage from flagging. Cinerarias for late blooming to be kept cool and airy, and not be allowed to suffer for want of pot room. These must not be trusted in cold pits after this season, for they cannot endure much frost. Hardly anything can be worse for the development of a healthy vigorous habit in plants than subjecting them to a high temperature at the present season, when light, so important to the healthy action of vegetable life, cannot accompany it.

PITS AND FRAMES.

Abundance of air to be continued as long as possible, avoiding, however, the least wet. As long as the weather remains mild and the thermometer can be maintained above 32°, give air night as well as day.—W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

Cauliflower.—Took up a few nice plants with balls from a border, and placed them in seven-inch pots in the orchard-house, with the hope of obtaining some early spring produce from them, as however good Broccoli may be at that time, it rarely equals the Cauliflower in delicacy of flavour.

Shallots and Garlic.—Planted, digging the ground nicely, levelling it, drawing drills a foot apart and about 1 inch deep, then firming the little bulbs, from dividing the larger ones, about 2 inches apart, and then scattering over them some charred rubbish. If the ground is very stiff, it is best to plant them still more shallow, for as soon as they begin to root they will firm themselves sufficiently. Before that time the charred rubbish and soot and lime will prevent the worms taking them out of the ground, and will also help to prevent the frost doing the same. One advantage of October planting is, that the plants are established before winter. We have rarely known the hardest frost injure these plants when well established. A few bulbs may be left for planting in February or March.

Onions.—Looked over the stored ones in a wet day, and found more giving way than we should have expected after such a dry season. Those roped are keeping much the best, hardly one showing any sign of rotteness. Hoed amongst the young crops in the open air, to keep the surface open and rough.

Digging and Trenching.—Of this we have been able as yet to do little, but the sooner the ground is prepared for early Peas and Beans, and for fresh plantations of Asparagus, Rhubarb, and Sea-kale, the better will the plants succeed. We now seldom sow Peas and Beans in the autumn, but the results of many years' experience, convinced us that from the 18th to the 25th of this month is soon enough to sow, as if sown earlier they were less able to withstand the frosts of winter and spring. In this respect there is often a great difference as respects hardiness between the young of vegetables and the young of animals, the latter being so easily injured, whilst the young seedlings of the former will stand often much harder treatment than older plants. For years, too, when our crop was sown on ground running from north to south, as on a south border, we used to throw the ground

into sloping banks 4 feet apart, and running from north-east to south-west, and sow the Peas about the middle of the sloping bank on the west side. The crest of the ridge, and a row of evergreen branches on the north side, did much to shelter the young crop.

Asparagus.—The ground for this should be deeply drained, or well broken up even into the subsoil. Where much Asparagus is wanted for forcing, an old-fashioned plan has never yet been improved upon. A large wide trench is dug out in winter—say 5 or 6 feet in width, and some 3 feet in depth, into this trench all prunings and hard rubbish are thrown in spring to the depth of 18 inches or 2 feet. Upon this, in May, some 18 inches of littery dung is placed to form a slight hotbed beneath; the soil is then used for growing ridge Cucumbers and Vegetable Marrows in summer, and when that crop is gone the ground and the dung are well mixed and turned over in winter, and then on this raised bed the Asparagus is planted as soon as it is 2 inches or so in height. This mode is best suited for heavy soil. Another good plan is to drain, or at least stir up and leave the subsoil; trench well for 30 inches deep, mixing manure all through, but keep the moat and beat decayed for the surface spit; turn that frequently, and finally turn up into little ridges from 26 to 30 inches apart. Plant on the top of these ridges, and give mulchings of rich manure during the summer. This is one of the simplest modes of producing good Asparagus easily, and in some respects it is more suitable for small gardens than beds. Asparagus may be planted at any time, but it is always best to do so when the young tops are about 2 inches above ground in spring, taking care that the roots do not become dried. Plants from one to two years old are better than older ones for planting. We have made preparations, by a slight hotbed, for taking up some Asparagus for forcing, but we have not done so as yet, as we dipped rather deep into our Asparagus reserves last season, and did not plant so much as we ought to have done. Other vegetables much the same as last week, with the exception of taking up some Sea-kale and Rhubarb ready to be placed in the Mushroom-house. Those who force these out of doors, should cover the ground now with litter, leaves, or clearings from the flower garden. A very thin covering of tree leaves—say from 12 to 15 inches, will give an early cutting of these vegetables if put on in time, so as to keep the summer heat in the ground. The less rank dung is used the better, as it always less or more injures the flavour, and if not often examined it is apt to draw out and spindle the heads, and then they have a lanky appearance at table.

FRUIT GARDEN.

Much the same as in previous weeks. Looked over stored fruit, and nipped a few berries from late Grapes inclined to damp in this muggy weather. Any root-pruning, replanting, or planting of fruit trees, should now be set about in all suitable weather.

ORNAMENTAL DEPARTMENT.

The rains having now come, all planting, replanting, and moving of deciduous plants and evergreens may now be proceeded with where water can be given. Where that is still scarce and the soil remains dry, it will be a good plan to open the holes and have the soil spread out round them. It will thus be damped by some showers, and be in a good state to go round the roots, so as to set them growing afresh at once without watering. In general at this season the soil is wet enough; but at a couple of inches or so from the surface in this neighbourhood, it is still too dry for successful planting without watering.

Lawns and Flower-beds.—The summer beauty is now gone, and what was once so pleasing is now becoming offensive to sight and smell. The produce of the beds placed in a large heap will yield a nice fermenting heap for many purposes. Hollyhock stems we will most likely burn or char. The lawns have been gone over with the scythe before brushing them up, so as to clear them of leaves, at least in all places where the leaves have fallen; and where, as in the case of the Oaks, these have not yet fallen or have left a good share behind, the clearing-up has been mostly confined to the walks. This work has met with some interruptions owing to other jobs and the state of the weather, as it is unadvisable to do such clearing-up when the wet would leave a dirty earthy appearance on the green grass. One of these

jobs has resulted from the cutting down of a number of trees close to the mansion and offices, which a few years ago would have been considered as an act of wanton destruction; but even in exposed places now the importance of air and sunlight round a dwelling is considered of more value than shelter accompanied by shade. The spray and the faggots from such cutting will give us a good supply of little pieces for lighting fires near at hand; and it is always advisable to have a number of these tied up and stored in a dry place ready for use. Where Willows are plentiful they are capital for tying them with. We generally use a little band of wheat straw. Say eight straws or so are laid down; a small handful of shavings, or straw, or stubble laid on it; and a good handful, say 6 inches through and 15 inches long, of the chopped twigs and branches, over which the two ends of the straw are brought, twisted round and stuck underneath the band; and with one of these nice and dry a fire may be very quickly set going in a furnace. This work is best done in a fine day in the open air, but we generally defer it to a wet day, as Friday proved itself to be. For the same reason, having been very busy with various other matters, the same wet day that set us away from the lawns and beds furnished a good opportunity of looking over a lot of

Scarlet Geraniums in the sheds. Some of these that we wished for centres of pyramids next season we stripped of all their leaves larger than a florin piece and many of the smaller shoots, and potted separately in four and five-inch pots, retaining the plants at their full length. The great proportion, however, we cut over some 6 or 8 inches from the collar, stripped off all the leaves, shortened any long roots, dipped the cut tops in lime and charcoal powder, and allowed the roots to stand some five minutes in chilled water, and then packed them closely in pots, boxes, or beds, say from twenty-five to thirty plants in a 12-inch pot, hanging well out round its sides, however, and set them beneath stages, or in beds, pits, or frames, &c.

One of the best lots of such *Geraniums* we ever had, as there was scarcely a miss in the shape of a dead plant among some 400, were thus managed: They were stripped as above stated, and then they were packed closely on the floor of a shed in soil neither wet nor dry. The shed had a window to the west, and a door that opened to the south. We made three beds in the shed, some 4 feet in width, with a two-feet path between them. The door and the window we opened in bright days and mild weather during the winter, but in dull foggy periods, and in frosty weather we kept all shut up, and in the latter case hung a mat inside the window. No frost under from 6° to 8° interfered with the interior of the shed; but when the temperature fell lower than that we spread a little hay over the beds of plants, and removed it as the weather became better. So managed these old plants, that bloomed splendidly the next season, cost little more trouble during the winter than roots of Dahlias and Potatoes would have done. We have as a general rule ceased to regard these as superior for our purposes to the small plants that we have struck and standing in boxes, and occupying from 1 to 1½ inch square each; but, then, each of these plants must be carefully attended to during winter with light, air, and watering, and must receive more room for potting and transplanting in spring, whilst these old plants require scarcely any attention all the winter through, except being protected from frost, and will keep alive though little light or air be given them as their portion. What was done in that shed may be done in any spare room, garret, stable, or dry cellar, only it would be advisable in all such cases to pack the plants in pots and boxes, firming the soil about them when it is in just a medium state being neither wet nor dry. If the roots are rather dry, instead of watering the soil to encourage damp, it would be much preferable to place a handful of such roots up to the collars of the plants for five minutes in chilled water. Unless the beds, pots, or boxes are dried by some artificial means, such plants will in general need no water until the fresh young leaves about the size of a sixpence are breaking all over them about March, and about April they will be in need of more room.

Some amateurs with very small parterres, plant out their *Geraniums* in pots, and in their case it would be the best plan to strip the plants of the foliage and pack them away in the pots—that is, supposing they had no glass to place them under. There will be enough of roots in the pots to

keep the plants slowly growing, and when turned out next season the roots that go beyond the pots will secure enough of luxuriance.

Plants grown in boxes outside the window during the summer will be still more easily kept in these boxes all the winter on the Harry Moore system. All that is necessary is to allow the soil to become rather dry, and place the box after the plants have been stripped of most of their foliage in an airy place, and where protection can be given in severe frosty weather.

Thousands of these showy *Scarlets* might thus be easily kept all over the country, and the cottager may make sure of them, as he does with a Dahlia or a Potato-root, if the frost is excluded, and the roots are neither over-damp nor kiln-dried, and the tops are neither skeletonised with fire heat, nor damped nor rotted by being placed in a continual fog. All things considered, no place is better than a hay-loft or a garret, where light and air can be given them in a bright warm day.

Calceolarias.—Finished putting in the last of our cuttings, or nearly the last, on Thursday, as we expect some novelties yet to come to us. We would have liked as well if all these had been in by the 1st of the month, but we could not well get at them, and we have no fears of their not being all right before March, if we can keep the frost from them. Such things rarely suffer from damp. A close atmosphere that would cover a *Verbena* with mildew, will just suit the hardier and moisture-loving *Calceolarias*. Having placed our *Amplexicaulis* cuttings in wooden boxes, we moved them from the cold pit, in a place where, if necessary, extra damp and frost can be excluded by a little dry heat, as they are not so hardy as the other shrubby kinds. Those who grow the herbaceous and semi-herbaceous kinds for show in April, May, and June, should see that the most forward have plenty of pot room, as if confined too much at the roots they will throw up the flower-stems prematurely.

Cold Pits and Frames.—A great proportion of our smaller plants, and cuttings striking of bedding plants, were under glass frames that had been used for various purposes during the summer, with less or more of a hotbed under them. These are about the worst receptacles we can have in dull, foggy, damp weather. If we use a frame for such protecting purposes, it is much better to place it on a raised platform of hard soil, so that all the moisture may run away from the sides and ends of the frame. When placed over an old bed the moisture soaks into it, and is sure to rise inside in the shape of thick vapour. That with foggy days combined, is almost sure to bring damp, at least in such cases as ours, where for economy of space we are under the necessity of placing the cuttings and young plants very thickly during the winter months. We went over the most tender of these, picking off any damped leaf, and set the pots on shelves in airy houses, where a little fire heat can be given, and by fresh surfacing the beds with dry coal ashes, the hardier plants left may be set a little thinner.

Lily of the Valley may now be taken up for forcing, and all hardy shrubs intended for forcing from *Roses* to *Rhododendrons*, will be all the finer if a bottom heat of from 70° to 80° can be given for a month before the top temperature is much advanced. Bulbs will have to be looked at, and mice kept from them, and those planted thickly out of doors in leaf mould may be lifted with their roots and balls and transferred to flower-beds, after these have been suitably prepared for them. The same will answer admirably for early flowering also in glasses, it being only necessary to take the ball of roots and earth in the two hands, wash them in a pail of water until nothing but the roots are left, place them carefully in the glass with a few bits of charcoal, and then fill with water.

Agapanthus in pots, which do so well with the bottom of the pots in water at the sides of a reservoir in summer, will stand very well all the winter in a dry shed, the pot plunged in, and just covered with litter or coal ashes, and so will all the varieties of the *Japan Lilies*. The *Lancifolium* group are just a little more tender, good pots of them will be kept nicely in a common cellar, as the damp of the floor will afford sufficient moisture until growth commences in spring, when the pots may be brought out, the drainage examined, and fresh surfacings of a rich compost given, which with manure waterings will render fresh potting often unnecessary.

Chrysanthemums, Cinerarias, and Primulas, will now require plenty of water, light, and air, and as the flowers of all of them show, a little weak manure water will be an advantage. Some Analeas well set with buds may be placed in the forcing-pit, and Camellias now must never know drought. Hardwooded plants should be kept separate from the softwooded, and air given to them more carefully, taking care that in the case of Croweas, Boronias, and Chorosemas, though the house has plenty of sweet air, that the air in cold, damp days does not strike on the plants at once. Mignemette in pots, and especially if grown in the tree or the pyramidal style, should now be kept free from damp in a sweet atmosphere ranging from 43° to 50°. In this dull, foggy weather care should be taken not to spill a drop of water in a house, or use it where not wanted. Watering all overhead in such circumstances is just an act of barbarism.—R. F.

COVENT GARDEN MARKET.—NOVEMBER 19.

Continental supplies, consisting of Apples, Pears, Medlars, &c., are very heavy, and home-grown fruit and vegetables are brought in abundance. Apples and Pears consist of the same kinds as noticed last week; Newtown Pippins are of very superior quality. Grapes are plentiful and good; of Pines there is a moderate supply, but sufficient for the demand; Peaches are over; Oranges from Gibraltar and Lisbon have come in, and prices rule lower. Owing to the open weather, Brussels Sprouts, Savoyas, Cabbages, and Greens, of all kinds, are abundant. Of Potatoes the supply continues very heavy.

FRUIT.

	s.	d.	a.	d.		s.	d.	a.	d.
Apples.....	1	0	2	0	Melons.....	1	6	2	0
Apricots.....	0	0	0	0	Malherries.....	0	0	0	0
Cherries.....	0	0	0	0	Nectarines.....	0	0	0	0
Chestnuts.....	14	0	20	0	Oranges.....	100	5	0	10
Currents, Red.....	1	0	0	0	Peaches.....	0	0	0	0
Black.....	0	0	0	0	Pears (kitchens).....	0	0	0	0
Eggs.....	0	0	0	0	Pine Apples.....	0	1	0	8
Filberts & Nuts 100 lbs.	80	0	80	0	Plums.....	1	0	9	0
Cobs.....	70	0	80	0	Pomegranates.....	1	0	4	0
Gooseberries.....	0	0	0	0	Quinces.....	1	0	3	0
Grapes, Hamburghs lb.	1	6	8	0	Raspberries.....	0	0	0	0
Muscats.....	3	0	7	0	Walnuts.....	14	0	20	0
Lemons.....	100	5	0	10					

VEGETABLES.

	s.	d.	a.	d.		s.	d.	a.	d.
Artichokes.....	0	0	0	0	Horseradish.....	2	6	5	0
Asparagus.....	0	0	0	0	Leeks.....	0	2	0	3
Beans Bush.....	0	0	0	0	Lettuce.....	2	0	4	0
Kidney.....	2	0	3	0	Mushrooms.....	1	6	2	0
Beet, Red.....	1	0	3	0	Must. & Cress, punnet	0	2	0	0
Broccoli.....	1	0	3	0	Onions.....	3	0	4	0
Brussels Sprouts.....	2	6	3	0	Pickling.....	0	6	0	0
Cabbage.....	1	6	3	0	Parasol.....	4	0	6	0
Capicums.....	100	1	0	2	Parasol.....	0	9	1	0
Carrots.....	0	5	0	8	Parsnips.....	0	0	0	0
Cauliflower.....	4	0	6	0	Potatoes.....	2	6	4	0
Celery.....	1	0	3	0	Radishes.....	0	9	1	0
Cucumbers.....	0	9	1	6	Savoy.....	1	0	2	6
Pickling.....	0	0	0	0	Sea-kale.....	3	6	0	0
Endive.....	2	6	3	0	Spinach.....	3	0	5	0
Fennel.....	0	3	0	0	Tomatoes.....	2	0	4	0
Garlic and Shallots, lb.	0	8	0	0	Turnips.....	0	3	0	0
Herbs.....	0	3	0	0	Vegetable Marrows.....	0	0	0	0

TRADE CATALOGUE RECEIVED.

W. Bull, King's Road, Chelsea, London.—Retail List of New, Beautiful, and Rare Plants.—1864-5.

TO CORRESPONDENTS.

* * We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to The Editors of the Journal of Horticulture, &c., 171, Fleet Street, London, E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

POTATOES (R. E. K.).—If you write to Captain W. W. Hornby, R.N., Elmley Cottage, Freeton, we have no doubt that he would give you the information you require.

POTTING FERNS AND BROMELIADS (A Ten-months Subscriber).—The proper time to pot these is the middle of March. Keep the Begonias dry during the winter, and the Ferns rather dry at the root, but not so as to affect the foliage. Our "Fern Manual" contains full directions for the management of all kinds of Ferns.

WOOD versus IRON ESPALIERES (W. D. B.).—Iron either well painted or galvanised is much preferable to wood. There is no fear of rust if only the uprights and wires are kept properly painted. Espaliers are chiefly employed for Apples and Pears. What tree is it you wish to know the suitability of for espaliers?

WINTERING BROMELIADS AND FANFOLIOLE (B. Solerites).—You are doing quite right to withhold water if you have no place to winter them in but a greenhouse; but if you have a house with a temperature of about 56°, and you give sufficient water to keep the foliage fresh, but not half so much in winter as in summer, your plants will flower most of the winter. On the other hand, if in a greenhouse, keep dry, free from damp and drip, and the plants will live with scarcely any water; but a little may be given now and then to prevent their drying up. The Fanfolioles should be kept dry, and be allowed a season of perfect rest by plunging the pots to the rim in coal ashes in a cold frame, where they will not require any water during the winter; or they may be wintered in a cold greenhouse, placing them in the coolest part, and not giving any water, except a little to prevent the soil becoming dust or very dry.

WINTERING HOLLYHOCKS (Stalkus).—You may take up the roots and pot them, plunging the pots to the rim in coal ashes, and keeping as near the glass as possible; but it is quite late enough to do this kind of work. A mat or two placed on the lights in severe weather will be all the protection required. Give air on all favourable occasions. Another way is to draw a little earth towards the crowns of the plants, and place litter around them closely, but not so as to cover the young shoots. You may, however, strew a little dry litter over them in frosty weather, removing it when the frost is gone.

DESTRUCTING MEALY BUG (Birmingham Subscriber).—Yours is one of those perplexing questions that no one can answer satisfactorily, because it is not stated what plants are infested with the pest to be destroyed. If plants, boil a pound of strong shag tobacco in a gallon of soft water for an hour, and strain off the liquid. Dissolve a pound of gum arabic and a pound of soft soap, also a pound of flowers of sulphur, the two first in warm water, and then add the sulphur, so as to form a sort of paste. Put this mixture in a tub containing ten gallons of water, heated to a temperature of 140°, mixing the whole well. Keep stirred, so as not to allow of the ingredients settling, and when it has cooled to 120° or 125° dip the hard-leaved plants, as Pine Apples, and 120° for plants generally, dip the plants in it for about a minute, taking care to wet all the axils of the leaves and the stems. Let the plants stand until dry, and then repeat the operation. In forty-eight hours after the last dipping syringe with water only at a temperature of 120°.

KIDNEY BEANS (C. & O.).—It is usually sown *Out-jung*, and to the seed of the *Dolichos catang*. It is of the size and firmness of a small Kidney Bean. Whether it would require decorticating before being pressed we cannot say, but we should think not. The seeds are not unlike Kidney Beans and vary in colour from black to pale brown.

VINEYERIES (A. Norrie).—If you try your experiment as to shading now you will be quite safe, if the shade of the second house rests only for a little on the front of the first house. No house should shade the other in the least in October or March. The higher you make your first house at back, and the steeper the more room you will have. For summer use the houses may be faster in the roof. For late Grapes to hang through the winter the roof should be as steep as for an early house. For early and late work, the system which you gave of a proposed house will do admirably. As to the commercial part of the matter, we would not like to take the responsibility of being an authority. Presuming that you have Vines 2 feet apart, and each yields 7 lbs., no great weight certainly—still you must recollect that you would not get that for several years; and then there is the capital sunk in the houses, soil, draining, &c., besides what you would spend for fuel, and we think the labour will be much more than you expect.

GREENHOUSES SHEDDING THEIR FLOWERS (C. W. P.).—This is very prevalent when they bloom late. We think it is the result of some check that is given the plants, either lack of sufficient heat, or a deficiency of water; but it is not certain what occasions this premature falling of the corolla. With us they bloom splendidly one year, and indifferently, though equal in promise, the next, and this under the same treatment and conditions of heat and moisture so far as we are able to determine. We are not, therefore, prepared to assign a reason for that which troubles us as much as yourself. The JOURNAL OF HORTICULTURE, &c., may be had free by post from our office for 17s. 4d. for twelve months.

SEWAGE FOR VINE BORDER (J. W. F.).—We would not use the contents of the cesspools for mixing with the Vine-border. After being well exposed to the air a little of it may be used for top-dressing. You should have taken off your bedding-plant cuttings earlier. Geraniums and Verbenas in that state will be better both of top and bottom heat, say 55° to 60° of the former, and 75° to 85° of the latter, until struck, and then harden-off. Calceolarias will be better without any heat. If any is given let it be as much as will afford a bottom heat of from 60° to 65°, but no top heat; but they will do without any very well, only give them time. The "Vine Manual" is 2s. 6d., and for 2d. additional you can have it free by post from our office.

LATE VINEY (J. Stockport).—With your large squares of glass we do not think that your proposed ventilation will be sufficient. Your most economical plan would be, in addition to the openings at each end, and opening the doors in the middle of the day, to have at least four ventilators at the apex of the roof, each 20 by 15 inches, say one 8 feet from each end, and the other two in the intervening space. These could slip in between the rafters and be pivot-hung, and only set the frame which holds the square. We should think, under the circumstances, if the clay is very tenacious, that you will not overstrain. Does the water lie in the bed of clay, with the bed of sand underneath? If so, you might as well go to the sand at once, and in that case we should think the drains 18 feet apart would do. We have known such cases as yours, where the water would not remain in a five-foot bed of clay if the bed of sand, gravel, or chalk, beneath was at all hollow.

INSECTS (M. Barbowme).—The large fly you sent was not a wild bee, but one of the drone-like flies, *Helophilus Pratorum*. The other yellow one is *Scutophaga merdaria*.—W.

VINES UNFRUITFUL (H. M.).—If your Vines are at all strong we would let them alone and try them for another year, as you think the border is all right; but though you may thatch in winter, we would remove the loose slates from the border in summer. If they had been solidly bedded we might suppose they increased the heat, but being loose they would keep the border cool, and keep sun and air from it.

BEURRE D'RAIS PEAR (W. Earley).—This, before it is ripe, is an excellent stewing Pear; and so are others of our first-rate dessert Pears, such as the Beurre Diel, Easter Beurre, and Chaumontal. Your fungus is *Nidularia campanulata*, usually found on wood shavings.

LINSEED OIL-CAKE AS A MANURE (Norfolensis).—It is quite as good as Rape-cake as a manure, and we have known it successfully used by being trenched in and well-mixed with the soil beneath each drill in which Carrots were sown. This was not only to act as a manure, but to keep the wire-worms from the roots. We cannot help remarking, in connection with this, that "The Driffield and East Riding Pure Linseed Cake Company" is the only one of which we ever read of a shareholder saying that "If possible, its management gave the shareholders too great satisfaction." The testimony in favour of the purity of its oil-cake must gain the attention of all stock farmers.

HEATED FERN CASE (Quite an Amateur).—We employ the Bijon Plant Case made by Mr. Stocks, Cabinet Maker, Archer Street, Westbourne Grove. It is ornamental, heated by Child's night lights, and these, with a green baize cover for winter nights, we find preserve the tenderer Ferns effectually.

NAMES OF FRUIT (O. M.).—Pears.—6, Ne Plus Meuris; 8, Bergamotte Cadette; 9, Beurre Diel; 11, Marie Louise; 12, Beurre Bosc; 14, Easter Beurre; 15, Eyewood. Apples.—1, Russet Nonpareil; 2, Winter Greening; 5, Adams' Pearmain; 6, Gravenstein; 7, Winter Pearmain. (J. F.).—5, Winter Hawthornden; 6, Golden Pippin. (R. H. A.).—1, Swan's Egg; 2, Beurre Diel; 3, Fondante d'Automne; 4, Bergamotte Cadette. Apple—Reinette du Canada. Where the numbers are not mentioned the fruit was unrecognised. (A. R.).—Your Pear seems to be the Red Doyenné. (J. P. S., Wimbleton).—1, Golden Reinette; 2, Colonel Vaughan's.

NAMES OF PLANTS (C. W. P.).—Your Orchid flower was completely smashed in transit through the post, and we can make nothing of it. You must send another and better specimen, and tell us what kind of leaves the plant has. (J. M.).—The Saxifrage is too numerous for us to identify a species from a leaf, but we think it is *Saxifraga corymbosa*, called by some Botanists *S. pyramidalis*. (A. Young Gardener, Gooles).—1, *Scolopendrium vulgare*; 2, *Pteris hastata*; 3, *Nephrolepis tuberosa*; 4, *Pteris tremula*; 5, *Adiantum capillus-Veneris*; 6, *Asplenium trichomanes*; 7, *Adiantum setulosum*; 8, *Pteris serrulata*. Many of the specimens were mere morsels. It is unreasonable to ask any one to identify plants from such fragments. (C. B.).—*Lastrea Filix-mas*; the small scrap *Lastrea dilatata*; the Moss *Dicranum glaucum*, White Fork Moss.

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

BRAHMA POOTRAS.

We suppose Dr. Johnson always prefaced his conversation with the word, "Sir." We can understand that "members" acquire a habit of doing so. We know that many vestrymen and common councilmen make it a practice to do so when they have occasion to speak. We had been reading the "Temple Bar Magazine," and looking at the title-page—"Sir," said Dr. Johnson, "let us take a walk down Fleet Street." We had a sort of inward chuckle, and we said to ourselves, Mr. Editor, Sir, let us walk through your last Number. "Brahma Pootras," by our "witty and able correspondent." We will make him attorney-general of Brahma Pootra, but we don't believe a word he says, so straightway we set to work to demolish his arguments. Who has not seen in country churchyards the following epitaph?—

"Affliction sore, long time I bore,
Physician's aid was vain,
Till Heaven did please, my woes to cease,
And eased me of my pain."

Kingsley in his inimitable description of the school where all were over-taught, without reference to age or talent, has paraphrased it thus (or something like it)—

"Instruction sore, long time I bore,
And cramming was in vain,
Till Heav'n did please, my woes to ease,
With water on the brain."

Being the epitaph on one of the unfortunate scholars who had sunk under the effort to make him a partaker in all the advantages of modern education. So, considering our able correspondent was buried with the Brahmas, we thought we would try epitaph the third.

"In Brahmas' cause he made a noise,
And fought throughout his days.
The J. or H. put him to rest,
And killed him with sham praise."

We wonder if he will ever write again about them. Is, or was, Dr. Bennett, M.D., or Mus. Doc., or LL.D., or (shade of Sydney Smith) D.D.? If he was the first, he treated the Brahmas and their origin as he would a patent medicine. What would be thought of the man who went to the pro-

prietors or inventors of Scott's Liver Pills, Holloway's Ointment, Barry Du Barry's Revalenta, or Thorley's Food for Cattle, and asked for the names and proportions of the different ingredients? Or suppose a man in Melbourne, the fortunate possessor of a nugget as large as a dustman's bell, what answer would he give to the passenger who inquired the exact spot where he found it? Mr. Bennett is brought up to the rescue, and his weight depends on the "evidence of his own senses." Well, it is clear our "able correspondent" is allowed no such latitude.

The mother of shows progresses deservedly, and every year the entries increase. This is, we think, most convincing proof the public approves the entire management of this great show. May its shadow never grow less.

"Y. B. A. Z." is a good, sound, common-sense writer, and if he be a maniac, there is method in his madness. That is a good idea of his, that the judge or judges is, or are, to give an account of their awards. Fancy the poor man the day after the show opens, meeting his constituents like a member of parliament, to render an account. We should like to be present.

Sir, we pray you excuse that we have used the first person plural, the editorial "we." We are no editor, but simply—Z. A. B. Y.

RAILWAY CHARGES FOR POULTRY.

I wish, through the medium of your widely circulated Journal, to make known to intending exhibitors of poultry at Birmingham a recent alteration in the scale of charges by the Great Western and London and North Western Railway Companies, which will, if acted upon, seriously affect regular exhibitors; and at the same time I would solicit your influence in trying to obtain a remission of so unjust a charge. According to the new regulations, a printed copy of which I have this day seen, all live poultry will be charged according to the regular scale per pound for distance, and an additional fifty per cent. put on to the already sufficiently high charge. Now this is encouraging poultry shows with a vengeance.

How I came to know was, I sent a pen of Aylesbury Ducks to Worcester at the regular charge, and on return a demand of half as much more was made upon them. I remonstrated and made inquiry, and such is the result.—EDWARD SHAW, *Plas Wilnot, Orvestry*.

[We hope that the Committees of the Birmingham and other poultry shows will use their influence to have this extra charge rescinded. Directors of railways make the same mistake that the proprietors of periodicals make when they raise their price to compensate for a declining sale. Both would act more wisely if they increased their temptations to win customers. Directors of railways should remember that poultry shows increase the number of railway passengers.]

POULTRY JUDGES.

BEING from home, I have only just seen "A CORK FANCIER'S" letter under the above heading in your Journal of the 8th inst. I should not have troubled you with any notice of it but for one or two misstatements which require contradiction. He states of the Judges whom the Cork Committee had appointed, "It so happened both of them were Judges approved of by the Poultry Club." This assertion I can only say is entirely without foundation, neither of the gentlemen ever having been even thought of as poultry judges by the Club, and only one of them as a Pigeon judge, though both are known to excel in this division.

As regards backing out of the matter, I fully intended still sending several entries; but as for promising the Club's assistance towards the expenses of the Judges, I was not in a position to do so, yet I undertook to bring it before the meeting at Birmingham.

As "A CORK FANCIER" appears so totally ignorant of the Club and its constitution, I beg to inform him it is composed of gentlemen of quite equal standing to his Society, and who have only the advancement of poultry shows in view, and to obtain an uniformity of awards, and also do away with all partiality; and that they are quite as inca-

pable of his gross and most unjustifiable insinuations, which from his own reference refute themselves.

When the public learn the names of the Cork Judges they will be able to decide between us, whether they are the well-known poultry Judges at London, Glasgow, and Birmingham your correspondent would fain lead them to suppose, though gentlemen of the highest standing and integrity.

Before your correspondent again rushes into print, I would advise him to carefully examine his grounds before attacking either an individual or a fellow Society without just cause.

A suggestion it only was, though of an interested exhibitor, and when declined there was an end of it.—A STEWARD.

P.S.—Since writing the above I have received the Aberdeen schedule, which I perceive is again under the Poultry Club—a proof that its influence is of great benefit to it, and highly approved of in that quarter, since I find its prize list is greatly extended, and the addition of six silver cups this year.

POULTRY SHOWS NORTH AND SOUTH.

I AM glad to see that this subject, to which I alluded a few weeks ago, has been taken up by several correspondents, and although each writer differs slightly, yet I am glad to find all acknowledge that the Dorking fowl or fowls ought to have more prizes and more classes at all our southern, perhaps I ought to say south-eastern, Shows.

I agree with the remarks of a "WILTSHIRE RECTOR" with one exception, and that is the desirability of introducing the dark-legged, non-sitting breeds into our south-eastern district. He seems to forget that the colour of their legs is a fatal bar to them as marketable chickens; and as for eggs, our market is overdone with French and Belgian eggs, sent over by thousands to our south-eastern ports. Chickens are our speciality. I have been seven years now in this chicken-rearing district, and I am sure "Y. B. A. Z.'s" Brahmas would find more favour than the blue stockings.

I again repeat that the Brighton, Tunbridge Wells, and Maidstone Shows ought to give separate classes for White, Grey, and Coloured Dorkings, and if Cuckoo and Speckled could be added so much the better. I am sure the committees would, in a year or two, find it greatly to their interest.

I trust "WILTSHIRE RECTOR" does not think that I am blinded by fancy. I can assure him I am no fancier of either coloured Dorkings or Spanish, but Silver-pencilled are particular pets of mine; still I am not blinded to the fact that they are not the fowls for this district. As for eggs, we are not desirous to compete with the foreigner when we can do so much better with white-legged chickens. Let us, therefore, improve our local breeds.—B. P. BRENT.

POULTRY SHOWS IN THE SOUTH.

I AM obliged to "Y. B. A. Z." for his courteous response to my request for some suggestions on the subject of southern poultry shows.

Some points have, I think, been clearly established by the discussion of the question in your columns. First, we see that southern exhibitors are quite prepared to support both new and existing shows in the south, provided that the schedules are framed in a liberal spirit, and due notice is given of the time of meeting by advertisement. The neglect of either of these conditions is fatal to the success of a poultry show.

Some of our southern managers, however, have not yet learnt this lesson. Take the case of the Kent and Maidstone Show: having merely by the chance mention of this Exhibition become aware of its existence, I applied for, and received its schedule. I found that by Rule 5, all exhibitors were required to reside in or occupy land in Kent; that no person could send stock unless he had been three months a subscriber, and that all animals and poultry must have been in the possession of the exhibitor three months previous to the Show.

Take, again, the case of Dorking, where the Show is confined to Dorking fowls. Obviously in cases such as these, what southern exhibitors want is not found. The next point we owe to "Y. B. A. Z."—namely, the wisdom of attracting

visitors to the poultry show by annexing it to an agricultural exhibition, of which it is sure to become the most popular part.

Again: it seems clear that the feeling of exhibitors is in favour, not merely of reviving in the south some good poultry shows, to be combined, as in the very successful case of Basingstoke, with an agricultural exhibition; but, also, that there is a prevalent and just idea that London ought to give us, once or oftener in the year, a poultry show as good as Birmingham; and here let me say, though not a member of the Poultry Club, that in my humble judgment we owe them thanks for the late Islington Show, which, although in its infancy, is by no means a puny bantling, but a bouncing healthy child. If the Crystal Palace Show comes to life again, all the better for the south.

Lastly: As "Y. B. A. Z." points out, we all may do something for the revival of southern shows by personal effort in our own neighbourhood. With an instance of this I will conclude.

Having read in your columns some three weeks ago, the origin of Lord Tredegar's Show, I sent my gardener with half a dozen pens of fowls, some of which had won laurels elsewhere, to a neighbouring agricultural gathering, among the roots and implements of which no cock had ever crowded. The final result was, that a neighbour seeing the birds, caught some of his fowls and added them to the collection. The next result was, that the fowls attracted more attention than either roots or implements, and when I went in the afternoon I could scarcely reach my pets. The third result is, that some members of the Committee are actively organising a poultry department at their next annual show. So from little beginnings may arise —, but I will not trespass longer on your space. The snowball is started and will gather as it rolls.—BRAHMA POOTRA.

ARE HAMBURGH FOWLS PROFITABLE?

I AM not much addicted to public speaking or writing, and, therefore, not up to prefaces. Poultry is my hobby. I dearly love my poultry. I live in the centre of a good-sized town, but have a tolerably good run for my poultry; yet I have not been altogether satisfied with the fowls I have kept. At first I bred and reared a lot of splendid Buff Cochins. These, after laying a very few eggs—say, seven or eight, wanted to sit and proved a great nuisance, frequently three-parts of them were broody, and I had scarcely any eggs from a dozen large and well-kept Cochins. And don't they eat! The quantity of food consumed by them astonished many people. I soon grew tired of my Cochins. Next, I had some Dorkings. These are splendid fowls for a farmyard, the best for general usefulness, and most profitable for the farmer, but not suitable to me as a fancier. I tried Game, but the chickens from the eggs (stated to be from first-prize birds), which I purchased, did not come true to colour, and other points, so they were soon given up. I do not like Spanish. I admire Game very much, but I think that Hamburgs will satisfy me better than any other breed, and I much wish for your opinion, or that of "WILTSHIRE RECTOR." I am happy to say I am not "ossy," and he sympathises with me and my hobby. I wish he would give us more of his articles concerning poultry. I will now tell you what I wish for. I want a breed of poultry "as special pets and favourites, with a possible view to an occasional exhibition," good egg-producers, tolerably hardy, easily reared, and not large. If you or "WILTSHIRE RECTOR," think with me that Hamburgs would be best, please inform me which are considered the more handsome, the Gold-pencilled or the Gold-spangled, and which the more striking as regards the markings, &c. Silvers would never look so well on account of the smoke. I shall also be very glad if any one will inform me through your Journal, the best and cheapest way to procure really first-class birds to breed from, "with a possible view to an occasional exhibition."—PARTLET AND CHANTICLEER.

[It is a pleasure to me to give any information in my power. I would say to the writer of the above, "Try, try, try again." Success in poultry matters never waits upon any but the persevering. "A tolerably good run;" by this I imagine something better than a small yard, probably an

orchard as well. A clerical friend of mine has gone through a similar course of trials and disappointments, especially in regard to Cochins, and has now settled down with Golden-pencilled Hamburgs. After three years' experience of these birds, he told me not long since, that he never means to change. Their never being broody, the vast number of eggs, and the moderate quantity of food eaten have established them firmly in his favour. These, then, I would recommend, supposing the run be worthy of its name. If otherwise, why not try Spanish? they would soon become favourites. A Spanish hen is singularly beautiful, no breed has a finer expression of face.

As to procuring the birds. I frequently see advertisements in this Journal, of fowls of all breeds for sale at moderate prices; and I was looking the other day at some so bought that were very good, and which may produce better. The mistake is, to think you can get first-class birds at a small price. This can never be the case unless the advertiser is ignorant of the value of his birds. Mind and have your walk dry. I recently saw the best of fowls, but their walk was damp and shaded by high walls. If you have not gravel or a gravelly subsoil, put plenty of stone drains in your yard, they will cost but little. Damp cinder paths are apt to bring roup.—WILTSHIRE RECTOR.]

HAMBURGH FOWLS IN THE SOUTH OF ENGLAND.

I AM very glad to see the "WILTSHIRE RECTOR" advocating the introduction of Hamburgs in the south of England. I have always been a great admirer of this breed, and formerly kept Hamburgs, but on changing my residence, some time ago, was obliged to give them up, and substitute Cochins and Brahmas in their place. I am so far dissatisfied with the exchange, that I would gladly go back to my old favourites if I could induce them to respect my garden, and dread my gardener's indignation. I certainly do not find that superiority in Brahmas over Cochins which is claimed for them; they are undoubtedly more difficult to keep within bounds. I do not find them better egg producers; and though, in common with Cochins, they consume an immense quantity of food, they do not seem to make flesh any faster. If any of your readers can suggest to me a mode of keeping Hamburgs, consistently with due regard for my garden, I should certainly return to them, and would embrace Dorkings also, but for the same objection. My garden is not walled, and the fence of my yards is only 6 or 7 feet in height, easily surmounted by either Dorkings or Hamburgs. The yards open on to a meadow of rather more than an acre, affording a good run; but even my present birds when let out prefer to leave the field, and come and torment my gardener, making comfortable holes for dusting themselves under our very windows. By netting over my yards I might certainly keep my birds in, but I am afraid they would not fare very well under such conditions. I was led to adopt Cochins and Brahmas as the only breeds possible under these circumstances; but shall be very glad to find any method of altering my arrangements, and the "WILTSHIRE RECTOR's" letter has induced me to reconsider the subject.—A SOUTH COUNTRYMAN.

WORKERS SHORT-LIVED.—The age to which worker bees may attain is not easily ascertained, and opinions differ widely respecting it. But since the introduction of the Italian bee, we may readily determine how old they usually get to be. If the native queen of a common stock be removed about the middle of May, and a fertile Italian queen substituted, we shall scarcely find one common worker among a thousand, on examining the colony about the first of August ensuing. If the substitution be made about the end of July, the proportion of common workers remaining at the end of October will be about one-fourth or one-fifth of the whole number. It is, hence, evident, that the duration of life in the workers is greatly dependant on the season. When forage abounds and bees are industriously gathering stores, their span of existence appears to be comparatively short; and we may estimate that during the height of the honey season they do not, on the average, live longer than

five or six weeks; though they perish more from accident and exhaustion than from actual old age.—(California Farmer.)

YOUNG BEES FOUND REVERSED IN THEIR CELLS.

I VENTURE to suggest that this rare occurrence may possibly be the result of a "mistake" made by the grubs themselves, instead of the mother bee. If the latter is really the culprit, I think there must be an abnormal arrangement of eggs in the ovaries; the manner of oviposition rendering it very unlikely that any power of misplacing exists in the performance of that function. On the other hand, it is at least curious, that numbers of contiguous larvæ should, without some physical cause, display similar aberration of instinct. It will be remembered by observant apianians, that the young grub for some days after it is hatched, lies in the form of an incomplete ring, or crescent, on the base of the cell, and only assumes the straight form after it is sealed over.—JOHN P. EDWARDS.

MY APIARY IN 1864.

At the close of last winter my apiary consisted of twenty hives, of which, in the summary I always draw up of the condition of every stock at the end of March, Nos. 1, 2, 4, and 11 were placed under the head of "weak in population;" Nos. 12, 13, 17, 19, and 23 as "moderately strong;" Nos. 3, 5, 6, 7, 8, 15, and 22 as "strong;" and Nos. 16, 14, 20, and 21 as "very strong." Every hive is at that time thoroughly inspected, so far as its capabilities to that purpose will allow; and I find this annual spring summary very useful, while it is highly interesting to compare the subsequent performances of each hive with its condition at that early period. I may have to refer to this subject farther on in this paper, when treating of the honey harvest.

One stock only had been lost during the winter, and that, a fine artificial hive of driven bees of the previous autumn, was suffered to die of starvation through culpable negligence on my part. This is, I believe, the only stock lost during the winter of three successive years, from an average of about twenty kept; and it might, by the timely administration of a few ounces of food, have been most easily saved. Being very populous, it is probable that my honey harvest would have been increased in a corresponding ratio.

Having a sufficient number of colonies, it was my object, from the very beginning of the season, to obtain honey, and not swarms; so that the majority were supered, and otherwise treated, to carry out that purpose. The theory of my practice formerly was to allow a certain proportion of the hives to swarm, so as to keep up a proper succession of young stocks; but now, since I have arrived at the adoption of the system of artificial swarming, to the almost entire exclusion of natural swarming, I find it easy to maintain the apiary in good working strength and condition, while devoting more of the hives to the purpose of honey-making. I consider myself a gainer in every way by following out this plan. The bee-keeper who works his apiary scientifically on the depriving system, will find it, as a rule, more to his advantage to purchase an occasional swarm or stock to supply any vacancies that may occur, or to renovate exhausted hives, than to devote any part of his own apiary to the purpose. For years my own apiaries have been managed on this plan, with a large share of success. Of course much more care and attention is necessary than by that of allowing hives to swarm and taking the chance of an odd super from any that does not swarm.

I will now give a short history of all my hives, including any swarms which may have been added to them during the summer.

No. 1.—From this stock every comb, save one, was removed for an artificial swarm. At the close of summer the box was filled with new combs, and well supplied with sealed honey. No honey fell to my share.

No. 2. A large octagon box.—Supered on May 9th with an octagon glass box, 7 inches in depth. On June 4th this was raised on a second octagon, of the same diameter, but

10 inches deep. These were both filled, the lower division containing a quantity of brood. Exclusive of this, 37 lbs. of nice honeycombs were taken.

No. 3. A ten-framed hive.—Queen from original Ligurian obtained from Mr. Woodbury. Supersed on May 9th with large square glass box, 13 by 7 inches. Honeycomb, 36 lbs., of prime quality.

No. 4. Flat-topped straw hive.—A swarm of 1858, which has been a most prolific honey-giver. Raised May 14th on an octagon Stewarton-box, furnished with empty combs. When the queen had commenced laying eggs in the lower division the old straw hive was removed, the bees driven out, and transferred to the box. It now promises to make a nice hive. It is worthy of remark that, although eight years old, the combs in the straw hive appeared by no means worn out, and were, at the time of removal (July 11th), occupied by five times the quantity of brood and eggs that the lower and newer box of combs contained.

No. 5. An eight-frame box.—Supersed early in May with an octagon Stewarton-hive, which was raised on a shallow ske on June 5th. From this, though not filled, 31 lbs. of excellent combs were obtained.

No. 6. A ten-frame box.—On May 9th a large but shallow nine-bar super was given. The bars fit the frames in the stock-hives. Honey taken, 30 lbs.

No. 7. Adjuster-hive.—Old combs in a very dirty state in the spring, and hive very light, but strong in bees. The adjuster super having been slipped down over the stock-box, communication was opened into a space of about 13½ inches, by 6 inches in depth. From time to time, according to the bees' progress in comb-building, the super was raised an inch or two, until a depth of 11 inches had been attained. This hive afforded me 37 lbs. of beautiful honey.

No. 8. A ten-frame box.—Supersed early in May with a bar box similar to that of No. 6. After the bees had about two-thirds filled it with combs, a swarm was thrown off the last week in May, and a stop put for a time to any further progress. Eventually the hive regained its strength, and a fine box of honey was taken; nett weight, 27 lbs.

No. 9. A flat-topped straw hive.—Stocked with a purchased swarm on May 19th. No honey given by it.

No. 10. Ten-frame box.—My original Ligurian stock, having a young queen raised from the brood, after the untimely death of the old Ligurian queen, caused by her own subjects in the previous autumn. A shallow bar-box super was first put on; three others of similar size, but without top, bottom, or bars, were slipped in between the super and the stock until a box of 13½ inches square by 15 inches deep was filled by the bees. This contained an enormous weight, but unfortunately the queen bred in the lower part of it extensively. Having removed the supers, and forcibly excited the bees, all the comb which contained any brood, or showed signs of having been used for breeding, was mercilessly excised, and given to another stock for hatching out. One of the ekes was taken away, and the rest returned to the bees to make good any deficiency. Eventually 40 lbs. of prime and pure combs were taken as my share of the spoil.

No. 11. Large octagon-box.—The bees would not work in a super, nor did they appear to become very populous until rather late in the summer, when a swarm was thrown off, and, unfortunately, lost altogether. This swarm flew to a neighbour's house, and entered a small crack in the brick-work below a window-sill, taking up their quarters under the flooring of the bedroom. They were smoked out with a great deal of trouble, but not saved.

No. 12. A flat-topped straw hive.—A late swarm on the 11th of July, the previous summer. The honey-harvest was virtually over by the 18th of the same month, yet late as it was the bees filled the stock, and collected about 4 lbs. of honey in a super. The hive was in good condition early in the year, but whether owing to throwing off a swarm undiscovered, or from want of fecundity in the queen, I cannot say, but it did not answer the expectations formed of it. A nice bell-glass of 12 lbs. 8 ozs. was the total amount of the harvest afforded.

No. 13. A frame-hive.—Brood-combs at different times were removed for forming artificial swarms, and the majority of the bees taken at another for the same object. This hive, though subjected to such severe deprivation, has recovered its strength.

No. 14. Eight-frame box.—Hybridised Ligurian stock. A large octagon glass box put on May 1st. On the 18th a second box, without bars or top, was slipped between the stock and first super. These formed, unitedly, an octagon super 13 inches in diameter by 14½ inches deep, which was completely filled, and removed on the 16th of July, weighing 72 lbs. nett, of the finest and richest honeycomb I ever saw. A second super, partially worked, was then put on in its place, and the bees added 3½ lbs. to its contents. Total weight of honey obtained 75 lbs. 8 ozs. This hive is an artificial swarm of 1862, headed by a pure Ligurian queen, given to me by Mr. Woodbury, being fertilised by a black drone, her bees are, of course, hybrid, but do not seem to be any the worse as honey-storers on that account. This hive gave me 50 lbs. of honey in supers last year. The stock is very heavy and populous at the present time.

No. 15. A ten-frame box.—An artificial swarm formed by driven bees last autumn. Deprived of several brood and honeycombs this summer for strengthening artificial swarms, and 10 lbs. 8 ozs. of rich honeycomb removed in frames from the stock-box, empty frames being substituted, the deficiencies were quickly filled up.

No. 16. A fine swarm, purchased a week after being hived. Inbringing it home by rail every comb fell. The bees were but little injured. On being liberated they went quietly to work, but a few hours afterwards suddenly poured out of the hive, and flew right off, without collecting together in the air, so that no one could distinguish in the least the direction they took. After a minute search and inquiry the swarm was given up as lost. About 7 o'clock in the evening a neighbour's gardener called to say that he had just discovered the swarm in a holly tree close to the ground, only about 50 yards from my garden. The bees had to mount over some very high trees and descend almost perpendicularly. Having hived and brought them home, I transferred them to a frame-box, first taking the precaution of putting in a frame of nice brood-comb, removed from a non-honey-collecting stock, thinking it possible that there might be no queen with the swarm: however, on inspection a day or two afterwards a fine queen was discovered. This being a common stock I killed all the drones, and in so doing let fall the comb on which I had just found the queen. The weather was very hot, and it was a complete smash. I collected the bees as well as I could, but saw nothing of the queen; but she afterwards proved to have been uninjured, and must have been taken up with the rest, as I found her on one of the frames before leaving. This hive was subjected to many drawbacks in the removal of combs and bees—nevertheless, it is now tolerably strong and well filled.

No. 17. A ten-framed box.—Supersed with the rest—never worked very well; and I believe a swarm was thrown off and lost from it on a Sunday, when no one was near. A super of 15 lbs. 8 ozs. fell to my share.

No. 18. A ten-framed box.—An artificial swarm raised this summer. Mr. Woodbury kindly offered me a sealed royal cell from one of his best Ligurian stocks. I at once made a nucleus from No. 13 by removing a comb of well-advanced sealed brood, together with a sufficient number of bees, confined them within doors for a day, after which liberated the bees, and fixed the royal cell just cut out from its own hive in the brood-comb. A week afterwards a fine queen was at liberty, and the nucleus-box was removed to Mr. Woodbury's garden for the purpose of being near to his Ligurian drones. The plan seems to have proved successful. She is a beautiful queen, and her offspring are apparently pure. By their own exertions, and the great breeding powers of the queen, together with the assistance of a comb or two from other hives, this nucleus has been built up into a fine stock.

No. 19. An eight-frame box.—Afforded a nice super of 12 lbs. weight.

No. 20. A ten-frame box.—Supersed early in May. This, one of my very best working hives, while filling a large super most rapidly, unfortunately threw off a swarm. Honey taken, 23 lbs.

No. 21. A ten-frame box.—A four-bar super, of the great depth of 15 inches, was filled by this time. Weight of honeycombs, 31 lbs.

No. 22. An octagon-box, which filled a super with 15½ lbs. of honey.

No. 23. A new adjuster-hive.—Some comb made, but no honey stored in the super.

No. 24. An artificial swarm raised this summer.—The bees destroyed the first of two young unimpregnated queens given to them, though every precaution was used.

Having given a short account of each hive and its doings, I will now add a table which will more plainly demonstrate the amount of my honey harvest for the year 1864.

Hives.	Weight.	Hives.	Weight.
No. 2	lb. oz.	No. 14	lb. oz.
.....	37 0	.....	75 8
3	38 0	15 artificial swarm taken	10 8
5	31 6	17 swarmed	15 8
6	30 0	19	12 0
7	37 0	20 swarmed	23 0
8 swarmed and gave	37 0	21	31 0
10	40 0	22	15 8
12	12 8		
13* artificial swarm taken	6 8	16 hives	440 0

The foregoing table shows an average produce of 27½ lbs. from each of the sixteen hives (notwithstanding that several threw off swarms, or were deprived of artificial swarms), which is, I imagine, far above the usual average afforded by the majority of apiaries, consisting of more than six stocks, in any known season. By referring to the early part of this paper it will be seen that the four hives which, in spring, were weak, afforded an average supply of 9 lbs. 4 ozs.; the five that were only in a moderately populous condition, also an average of about 9 lbs. 4 ozs.; the seven set down under the head of strong show an average of 26 lbs. 10 ozs.; and the four named as very strong exhibit an average of 42 lbs. 6 ozs. Thus will be seen the importance of maintaining every hive in the highest possible condition as to population during the winter and spring. Had the summer turned out a less abundant honey season, many of the hives which came under the category of weak and middling would have done nothing at all. Therefore my advice is to let no weak hives be put up for the winter; and if any hive shows signs of weakness in early spring join it to another. My time was so very much occupied in the early part of this spring that it was quite out of my power to attend properly to carrying out this rule, or I have no doubt that a larger supply of honey would have been the result.—S. BEVAN Fox, *Exeter*.

TAKING HONEY FROM COMMON HIVES.

THERE are many individuals, and, perhaps, some amongst the readers of THE JOURNAL OF HORTICULTURE, whose circumstances do not permit them to make use of the new and improved hives, or the methods adopted by means of glasses and caps, whereby what is termed virgin honey is obtained.

For the benefit of those, therefore, who have only bell-shaped straw hives, I can recommend the following as a good method for obtaining honeycomb equal in beauty and purity to any I have ever seen produced in glasses. But I must premise that the person who would put it in practice, must first acquire the simple art of driving. Well, then, supposing a large swarm (either a top or two casts united) comes off at the commencement of good weather, and the season continues favourable, it will be found that at the end of four or five, or at most six weeks, the skep, if of moderate size, is quite filled with honey and brood. This can easily be ascertained by feeling its weight. If satisfied that it is so, remove the skep to a little distance, and drive out about half of the bees, with their queen, leaving the remainder to hatch out the brood, and carry on the labours of the hive. The expelled bees may occupy their former position. The skep from which they have been driven must be placed at some distance, not less than twenty or thirty yards.

Leave it thus three weeks longer and drive it again, and you will find that you have a skep well filled with beautiful honey, and with scarcely any young bees in the brood cells. Take two instances out of many.

1863.—Swarm lodged in a common straw hive July 9th; driven August 6th; driven finally August 20th; contained 36 lbs. of honeycomb equal to any wrought in glasses.

1864.—Swarm lodged in a common straw hive July 4th; driven August 3rd; driven finally August 22nd; and contained 30 lbs. of pure honeycomb equal to any wrought in glasses.

* Gave an artificial swarm and 6 lbs. 8 ozs.

Precautions. Drive on a damp or cloudy day, or in the forenoon or afternoon when the heat is moderate, and after driving the skep place the floor-board on the mouth, and invert it with the edges of the combs to the zenith.

There is little danger of expelling too many bees, the nurses adhere so tenaciously to the brood-combs.

In the case of doubled casts there will occasionally be no eggs laid by the young queen for five or six weeks. The driven bees may be profitably returned to the old stock, or sent to the heather, if the driving takes place at the end of July.—R. S.

A NEW BEE BOOK.

SEENING the request of your correspondents, "R. S." and a "CONSTANT READER," that a "Bee Book" might be written by Mr. Woodbury, I quite coincide with them, that it would be an inestimable favour to all apiarians, and I feel sure it will greatly assist beginners, by describing those recent discoveries in bee-keeping which Dr. Cumming states have not been made; but which I fear he has not seen, and, therefore, concludes no one else has. I send this in acknowledgement of the many inquiries I have made of Mr. Woodbury through your Journal, and his practical suggestions have answered my purpose in every respect.—T. S.

CAUTION IN OPERATING WITH BEES.

In operating upon bees at this season much caution seems to be necessary, and experience is almost the only guide to enable one to meet emergencies which may arise.

When examining a hive on the 24th of September I allowed it to remain on its own stand, and shifted each frame separately into another box a yard or two on one side of the stock under inspection. I soon observed that the bees which took wing, instead of returning to their own hive, were crowding into the unicomb-hive which stood close to it. I at once completely closed the entrance to prevent any farther ingress, and kept it closed until the operation was completed, and the dusk began to quiet the uproar occasioned in the apiary. On looking into the unicomb I saw that it had received a vast accession to its population, but no fighting had taken place; the bees were, however, in a state of great agitation, but on the following morning I found that the queen in the unicomb-hive was under arrest. I allowed the cluster to remain undisturbed, as I did not value the queen, until the evening, and then dispersed it with a few whiffs of tobacco smoke. The officers in charge soon began to give way, and a general cry of "*sauve qui peut*" seemed to be the order of the day, with a grand run upon the stores. The queen regained her liberty, and is now, I believe, all right, but I failed to discover her this morning. She is, however, so small, scarcely any larger than a worker, that it is sometimes difficult to single her out. Nearly all the bees which had betaken themselves to the unicomb returned to their own hive the next day.

The disturbance brought a vast number of robbers into the field, and a great many entered the hive and helped themselves to honey whilst my search for the queen was going on, and after all was finished the hive was almost in a state of siege. Two hives, I noticed, were particularly busy in sending out foragers, and the entrances of these, and also of the adjoining hives, were at once stopped to prevent fresh reinforcements from being sent to the invading army. The robbers, when loaded, returned home, and clustered outside their respective hives, and comparative tranquillity was soon restored in the besieged hive. When the robbers had all departed I closed its entrance with perforated zinc to prevent any further inroads being made before the bees had recovered their equanimity after the disturbance caused by the inspection. I afterwards contracted the entrance, so as to admit of only a single bee going in, and the inmates seem to have kept the burglars at bay, although many rascals were hovering about the hive all day.—J. E. B.

RULES FOR PURCHASING BEES.—Select two-year-old stocks of large size, that swarmed the previous year. It has been demonstrated that such stocks have young and vigorous

queens; and are generally well-conditioned, promising a healthy generation. A very old stock should be rejected, even if it swarmed the year before and contained a yearling queen, for the obvious reason that the bees, having been bred in the old contracted cells, will be found of small size and insignificant in numbers. If you take your hive away to get a swarm placed into it, always purchase the first or prime swarm, and see that it is given you. Do not be put off with a second or late swarm. Choose a stock to commence with as you would choose a wife—get the best you can find. If you obtain one in the old box-hive invert it, and secure the bees by a cloth tacked securely over the bottom. Take it home when the air is cool, attend to it regularly, obey the directions as given, and then congratulate yourself on having started right. In the purchase of bees there are many things it is well to observe. Remember if stock-hives are to be procured, ascertain the age of the queen. To select a young, healthful mother seems to be a forward step towards a vigorous progeny—(*Flanders' New Bee-book, American.*)

BEEES NOT CARNIVOROUS!

So all the efforts of my inventive genius are vain! and all my bright visions of fame and profit at an end! Bees will not eat meat after all. I suppose that point is now settled, although when the subject was first broached, the diffident uncertainty of our great apian oracle "A DEVONSHIRE BEE-KEEPER," obliged one to reconsider conclusions long foregone. That bee-covered "turkey drumstick," which "RUBY" describes, had certainly an awkward look about it. Its appearance indicated a decided gustative attraction for the occupants of the hive in which it was placed. "Seeing," they say, "is believing," and when "RUBY" was assured, and that by a lady, that bees for many generations (apian I mean), had been invigorated to bear up under the rigour of many long and dreary winters by the virtue of a morsel of meat, I do not quite see how he could be guilty of such ungallant incredulity, as to reject the testimony of his fair informant, corroborated, as it seemed, by the evidence of his own observation; and I think, further, that "RUBY" was quite right in publishing in your pages a fact which, if verified, would prove of the utmost value to your apian readers. The experiment has now been repeated, and, as many of us expected, signally and universally failed. Had it been otherwise, what a "wonderful success" my "patent bee food" might have obtained! However, if I thus lose all hope of profit by invention, I shall relish my honey as heretofore, and not allow disgust to mingle with my amber sweet, by thinking of dead flesh whilst eating my bread and honey.

Alas! how many of our cherished ideas must be consigned to the "limbo" of crude notions! But never mind, we are still going on with our education, and if we mount up to real knowledge on the footsteps of our own proved ignorance, all the better for us. It will make us less confident, more diffident, and call forth our observing faculties, by the process of individual mental cross-examination. I do not know, after all, whether meat-feeding would be an improvement upon the usual methods—certainly not upon the Woodbury inverted bottle-feeder, for honey or syrup, which I consider by far the simplest and most efficient mode of supplying the wants of an impoverished hive yet invented. I thought certainly, had it not been for some of these celebrated modern notions, being recently exploded, of making some of my poorer hives participators of the approaching Christmas festivities, by inviting them to an early dinner (weather, of course, permitting), of roast turkey and a little Scotch ale, the latter "mulled" or plain as they might prefer, but I shall now leave them to their undisturbed hybernation amidst the more genial fare of their own selection, and indulge in the retrospective fancy of my projected Ruby-Cumminic apian feast.—RUBY BLUSH.

I STATE this as a fact. I have tried my bees with meat, and they will not eat it. One day I gave them a mutton chop a little warm, and watched them to see if that would entice them to eat it; but they only had a lick or two and then left it. I allowed it to remain all day and night, and then I took it away. I might as well have given them a

stone. Do you think "RUBY" was in love with the lady he speaks of? If so, she might have emptied the teapot under the hive, so that it was only a lot of tea leaves that he saw, and not bees. Ladies are sure to be up to some of their tricks if they have a not-required lover.—P. R. L.

FOOD OF BEES—STANDS FOR HIVES.

I PROMISED in my last letter to give the opinion of a friend, an old and successful bee-keeper, as to their carnivorous propensities. He says, decidedly bees will eat the flesh and even the bones of birds, chickens, &c., if they are driven to it by hunger, but that while they have anything else to eat, they will not touch flesh. If this be true, as seems likely, the evidence of "E. S." in this week's paper, would not decide the point. Is it not possible that bees, like men, may by long use, become fond of food which was at first unnatural and distasteful?

Have any of your correspondents noticed the great partiality of bees for an early, and in my opinion, very charming spring annual, the *Limnanthes grandiflora*?

Now, that I think of it, I would mention another thing in this rambling letter. I often hear the question, What are the best stands for single hives? Taylor, I think, in his manual, mentions the danger of wooden posts decaying under ground. But I have never read or heard of the simple and ornamental plan I have for some years adopted for my few exposed hives, a Neighbour's cottage-hive among the number—viz., a common white drain-pipe, of either six or nine-inch diameter. They are about 4 feet long, and may be sunk in the ground to the required depth, without any danger of rotting or shaking. I nail pieces of wood at right angles on the bottom of the floor-board so as to fit well within the pipe, and this keeps all steady.—A. W. B.

[The employment of a drain-pipe for a hive-pedestal was first suggested by our esteemed correspondent "A DEVONSHIRE BEE-KEEPER" in page 128 of the first volume of our New Series. There can be no doubt of its forming an excellent and enduring support either for hive-ranges or for single stocks.]

ADDENDA.

COOKS, COOKERY, AND WILTSHIRE BACON.

"Do you think you could prevail upon 'WILTSHIRE RECTOR' to give us a slight addendum to his recent excellent article on cooks, bacon, &c.? He says the grand secret for success in making bacon, is the letting off the brine; but he does not tell us the exact how and when, to do this. Then I want to know how he recommends its being cooked, for I can scarcely ever get it twice alike at different hands—sometimes quite flat and nearly raw, sometimes frizzled and curled into fantastic forms, and a mere shadow of its former self; in fact, all ways, but very rarely sent up in an enjoyable and wholesome manner. It is like boiling a potato, simple enough, and yet how few can do it! Can 'WILTSHIRE RECTOR' tell us a good way of smoking bacon to get it mild?—W. H. B."

I most willingly comply with "W. H. B.'s" wishes, and will answer his questions to the best of my knowledge and ability. First. As to the letting off the brine. I manage it in this way. In one corner of the wooden tray before described, is a circular hole an inch in diameter. The tray is set upon blocks with a gentle slope towards the hole. A pan is put on the ground, and from first to last of the whole month of the curing every drop of brine runs off towards the hole, thence down into the pan. Secondly. As to the cooking. I have the slices cut very thin, as thin, indeed, as possible; they are just popped into a fryingpan, turned the moment the heat is seen to be through them, and then they remain on the other side a still shorter time. This is a nice operation, dependant for its success upon the cook's care and good judgment. Usually we suffer frightfully for a week at least, when we have a new cook, and even then periodically, when that functionary is careless or out of humour. The cooking of bacon is so nice an operation that it reminds me of an anecdote concerning a certain lover of pears, who was found with his watch in his hand, one eye upon it, and

the other upon a pear placed on the chimney-piece. "What can you be doing, doctor?" exclaimed the gentleman upon entering the room. "Hush, my dear friend," was the reply, "that pear will be ripe in just ten minutes, after that it will be spoilt." Turn the ten minutes into ten seconds, and the anecdote applies to the cooking of bacon.

As to "W. H. B.'s" last inquiry, I can say nothing, having had no experience of smoking. When the fitches are taken out of the tray, they are rubbed all over with bran, and then hung in the kitchen. Pieces are cut from them as wanted.

Another letter which has come into my hands runs as follows:—

"Dear Mr. Editor,—In a paper from a 'WILTSHIRE RECTOR,' lately published in your admirable Journal, I find a curious proposition as to the advisability of transforming wives into cooks, or cooks into wives. May I be allowed to enter my solemn protest against the former idea? The latter is, of course, no business of mine, and it may be that cooks possess a cure for exigent husbands as well as for bacon.

"Good cooks are, doubtless, excellent things, but I grieve to be obliged to own how much better are men than women cooks. I believe this is an acknowledged fact. Let me then base a proposition on the fact—let the husbands be the cooks; let men at Oxford take honours in devilled bones and réchauffés, and let hashes and fricassées settle the wranglers at Cambridge.—AN OVERWORKED WIFE."

"AN OVERWORKED WIFE!" This title goes to my heart, there should never be even one overworked wife. Let me hope that it is an imaginary title; let me fancy that this overworked wife is no wife at all, but a maiden lady, who imagines wives are overworked. But yet, after all, I fear it is a true title, for she is so overworked as not to have read my paper carefully. If she turns to it some leisure minute—say after the bairns are in bed, the gudeman asleep in his chair, and the servants doing their duty, she will see that no "proposition is made as to the advisability of transforming wives into cooks, or cooks into wives." As to the latter, I merely quoted a true anecdote; as to the former, I simply stated that woman is the cook, that it is so. I said, "Among the countless thousands of benefits and comforts coming to us from woman's presence in the world, stands this—she cooks for us." And with few exceptions it is so, I imagine, throughout the world, or at any rate throughout our world—England. All I suggested was, that it would be well if ladies knew how to cook, giving as a reason, "that the best mistress is the one who knows how work is done", and jokingly looked to lady cooks as a resource in extremity. How many a woman by birth a lady, and now in the colonies, wishes she knew a little more of the usefule!

By the way, I see another reason, conclusive to my mind, that "OVERWORKED WIFE" is a wife, inasmuch as she confesses, albeit she is grieved to do so, that men cook better than women. So she knows us, through one good specimen, her lord, and acknowledges us to be superiors even in cooking. But for my part may no morsel ever reach my mouth that was not cooked by woman's hands. Let the light fingers still mould my pastry, turn my pancakes, stir my preserves. Let no man cook for me. If he must do something of the kind, I would trust him to make my pickles, perchance they would be all the sourer. Even wranglers would make a sad hash of the hashes, I should not be surprised if they went into the ashes. Devoutly wishing that "OVERWORKED WIFE" may be so no longer, I will bid her good-bye, just quoting one line of Tennyson.

"Men for the field, and woman for the hearth."

Yes, even for the hot hearth.—WILTSHIRE RECTOR.

REMOVING HONEY FROM HIVES.—Two years ago we tried the following experiment on a hive of bees, from which it was desired to take the honey:—Having bored a few holes near the top of the hive it was then inverted, and an empty box of the same size placed over it; both were then lifted into an empty tub, into which water was slowly poured, allowing time for the liquid to penetrate through the holes, but not too fast, in order to avoid drowning the bees. As the water rose among the combs, the bees found

their way into the empty box, which was then lifted off, and placed on the bee-stand. The box, full of water and combs, was then lifted gradually out of the tub, the water escaping by the holes through which it entered. The whole operation occupied but a few minutes, and scarcely any bees were lost. The short time necessary prevented the honey from becoming dissolved, and as the greater number of cells are sealed up, there is really little danger of such loss being sustained. After the water was drawn off it was found to be only slightly sweet, the combs soon became dry, and the honey was in no way injured.—(California Farmer.)

[We fancy very few British apianians will be induced to try this mode of depriving bees, which seems indeed to savour not a little of the primitive method of washing gold as practised in California and other diggings.]

COWS MILKING THEMSELVES.—Simultaneously with your articles on this subject, I met the following notice in Mr. Baring-Gould's "Iceland," and copy it in vindication of the poor maligned hedgehog,

"I noticed a cow with a great hamper tied between her hind legs. This, said the farmer, is a cow which milks herself and when once they have taken a fancy to their own milk, a complete circulation is established and they give up eating."—A. Z.

OUR LETTER BOX.

SILVER-PENCILLED HAMPSHIRE COCK'S TAIL (R. W.).—I inadvertently the description we gave at page 384 is that of a *Spangled* Hampshire cock's tail. The *Pencilled* Hampshire cock's tail should be ample, full-feathered foundation, colour black, the sickle and principal feathers edged with silver. The black should predominate, except in the tail coverts, where the silvering may be increased.

GUINEA-FOWLS ROOSTING IN TREES (W.).—Very young Guinea-fowls are like young Pheasants, being susceptible of cold; but the same similarity exists when they are grown up, and they are then hardy enough to roost anywhere. A hard-plumaged bird with his head under his wing, and his body in the smallest compass, his legs gathered well under him and buried in the feathers, does not suffer much from cold or wet. Instance Pheasants in coverts.

YOUNG CHINESE GOOSE LAYING (H. A. F.).—It is not a very uncommon occurrence, and we have known the young reared when the ground has been often covered with snow.

POULTRY MAKING A RAID (R. L.).—Put wire-fencing 5 or 6 feet high. Paint it green and it will be hardly visible. It will keep out all fowls but we will not answer for Turkeys or Guinea-fowls, especially the latter. They are the hyenas of domestic poultry.

COCHIN-CHINA FOWLS (F.).—We cannot recommend any dealer. It is entirely a matter of taste whether the White, Buff, or Partridge-feathered variety is selected. We prefer the Buff. When we require fowls of any breed we attend an exhibition, and buy pullets from one owner and the cock from another. Never breed from brother and sister birds.

DUCKWING GAME BANTAMS' LEGS AND WEIGHT (R. T. Bentham).—Game Bantams' legs may be of any colour, but they must match. The lacings of a Sebright should be moderate, neither heavy nor light, but if choice is necessary between extremes we should prefer the former. It must, however, be lacings, not blotchy, or in patches of any colour. There is no fixed weight. They cannot be too small, and formerly the cock was limited to 17 ozs.

COCKATOO EATING ITS FEATHERS (C.).—The cause of your Cockatoo biting off the tops of its feathers is an irritation of the skin, owing to its having had food of a greasy nature. Feed it on soaked or boiled Indian corn, soaked bread without milk, hemp and canary seed, and let it have a tepid bath occasionally on a warm day. If the bird will not bathe in a soap plate full of tepid water, pour the water over it through the fine rose of a watering-pot.

LICE ON A GOLDFINCH (G. R. B.).—Dust under the feathers, and especially under the wings, with flowers of sulphur. Wash the cage thoroughly, and fill the crevices of the floor with the sulphur.

WOODBURY FRAME-HIVES (William Carr).—It is perfectly certain that well-made frames, when properly filled with comb, will keep their perpendicular position without the aid either of propolis or bottom guides of any kind. Imaginary difficulties appear in this case to have led to fancied improvements, which, so far as we can perceive, have not even the merit of novelty to recommend them. The one you describe was tested and rejected by Mr. Woodbury many years ago.

NOTCHED BARS FOR FRAME-HIVES (A. W. B.).—We have no doubt that Messrs. Neighbour will, on application, readily supply the deficiency.

LIGURIAN QUEENS (J. M.).—The statement is untrue. Mr. Carr never possessed a Devonshire-bred bee.—A DEVONSHIRE BEE-KEEPER.

LONDON MARKETS.—NOVEMBER 21.

POULTRY.

There is a large supply of poultry and game, with a very small demand.

	s. d.	s. d.		s. d.	s. d.
Large Fowls	2	3	to 2	6	
Smaller do.	2	0	"	2	3
Chickens	1	6	"	1	9
Geese	6	0	"	6	6
Ducks	1	9	"	2	0
Pheasants	2	0	"	2	6
Grouse	3	6	to 2	3	
Partridges	1	6	"	1	9
Hares	2	0	"	2	6
Rabbits	1	4	"	1	5
Wild do.	0	8	"	0	9
Pigeons	0	8	"	0	0

WEEKLY CALENDAR.

Day of M th	Day of Week.	NOV. 29—DEC. 5, 1864.	Average Temperature near London.			Rain in last 37 years.	Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock after Sun.	Day of Year.
			Day.	Night.	Mean.	Days.	m. h.	m. h.	m. h.	m. h.		m. s.	
29	Tu	John Ray born, 1628.	47.8	34.7	41.2	19	44 af 7	51 af 3	38 7	22 4	●	11 20	334
30	W	St. ANDREW.	48.0	35.0	41.5	20	45 7	53 3	36 8	16 5	1	10 58	335
1	Th	Plane leafless.	48.4	35.2	41.8	17	47 7	53 3	27 9	19 6	2	10 35	336
2	F	All deciduous trees leafless.	47.4	34.2	40.8	16	48 7	52 3	12 10	30 7	3	10 11	337
3	S	Dandelion flowers.	47.0	33.8	41.1	20	49 7	51 3	48 10	43 8	4	9 47	338
4	Sun	2 SUNDAY IN ADVENT.	47.6	35.7	41.6	17	51 7	51 3	21 11	59 9	5	9 23	339
5	M	December Moth appears now.	48.4	34.7	41.5	23	52 7	50 3	49 11	14 11	6	8 58	340

From observations taken near London during the last thirty-seven years, the average day temperature of the week is 47.8°, and its night temperature 35.0°. The greatest heat was 62° on the 1st, 1837; and the lowest cold, 14°, on the 30th, 1856; and 5th, 1844. The greatest fall of rain was 0.56 inch.

THE DECAY OF THE ROYAL HORTICULTURAL SOCIETY.



ERO fiddled whilst Rome burned," and the mis-managers of the Royal Horticultural Society are fiddling whilst it is decaying. Were it not capable of noble results to a science so associated with home enjoyments and home decoration we might let them continue to fiddle; but they are,

by their erring judgment and misdirected trifling, ruining a Society capable of effecting too much substantial good for us not once more to record a warning, and to invite all who think as we do—that the Society is worth preserving—to rescue it from the peddling hands and Tartuffe heads that are now trifling whilst hastening its descent.

We have before us the regulations for 1865, and no more palpable evidence of fiddling incompetency was ever sent forth. Some glaring mistakes which characterised the proceedings of the current year have been avoided, and some small good alterations have been resolved upon. But there are quite as many small and great errors proposed to be committed. Let us note upon some of them in the order in which they occur.

What can justify the expense of a *déjeuner* to the Fellows, whilst the Society is so deeply in debt?

Why are so many bands of music to be engaged? One on each occasion is quite sufficient.

Why are there to be fortnightly meetings and weekly shows? Why not have them fortnightly, and simultaneously? The supply of plants and the attendance of competent judges of fruits and flowers would then be quite sufficiently taxed.

What is the gain to either the Royal Horticultural Society or to country Societies by these being allowed to enter into union? Will the funds of either be strengthened by the combination?

Why are the spring meetings fixed to be on the same days as those of the Royal Botanic Society? Will this increase the number of visitors?

Why is the one Great Show to be held on a Saturday? It is a day which was formerly chosen by the Royal Botanic Society, and which they found so inconvenient that they changed their great show days to Wednesday. If it did not answer the purpose of the Royal Botanic to hold their Shows on Saturday, we fail to see how it can be advantageous to the Royal Horticultural Society to do so. We believe Saturday to be an objectionable day on two grounds. First, because, since the extension of the railway system, and the facilities the various companies afford for people to pass from Saturday to Monday in the country, many take advantage of that privi-

lege, and it is not one of the frequent flower shows that will induce them to remain in town. And, secondly, it is objectionable because it deprives the exhibitors and their assistants of the rest and quiet of the following day. It is late on Saturday night before they can repack their plants and leave the place of exhibition. Many of them are travelling all night, and do not get home till Sunday morning, and then they have to proceed to unpack and replace their collections. Or, those who object to travel all night and to unload their plants on Sunday morning, are compelled to remain in London at great expense and much inconvenience till the following Monday.

We observe that the Pelargonium Show (including Scarlet and Variegated varieties, which are not in bloom till July), is to take place on the 3rd of June, when it is not possible to exhibit the Scarlet and Variegated varieties, and for which no provision is made at any subsequent Shows in July when they are in their best condition. Considering the fine effect produced by these at the Exhibitions last year, and the great interest they created, we regret that some provision is not made by which the public may see these attractive flowers in their greatest perfection.

How is it there are no Roses in pots included in any of the spring Shows? Last year the Azalea and Rose Show was the most attractive of all the spring Exhibitions, and in the programme for this year there are no Roses mentioned, except at the Great Show on the 1st of July.

Such are only a few of the fiddling changes and grave mistakes to be perpetrated in 1865; but where is there a single powerful effort apparent that might stay the Society's decay?

That the Society is decaying needs no other proof than that exhibitors will not contribute to its shows; that the public refrain from attending them; that all speak of the Society with contempt; and that its Fellows next February, if the account is made up correctly, will be found largely diminished. We say this because we know, if the management is not changed, many very influential Fellows who will either diminish their subscriptions or cease subscribing entirely.

Now why is this?

The displeasure caused by the undignified, because illegal, retention of office by those members of the Council who were irregularly elected, has spread wider and sunk deeper than those gentlemen seem to appreciate.

The neglect of the Chiswick Garden, unsurpassed though it is by any ground near London in picturesque beauty, and having no rival anywhere to its collection of hardy fruit trees, and the degradation of such a garden to be a mere nursery for plants to feed the South Kensington anomaly, is a source of indignation and regret to all who love gardening, and who hold the opinion, ignored by the Managers, that a horticultural society should promote horticulture rather than pantomimes. Selling Grapes from the splendid vinery to the Fellows might be justified; but to sell them to any customer at the wholesale market price, and to retail punnets of Straw-

berries at a profit, bought wholesale from Covent Garden fruiterers, is far below the dignity and is totally beside the objects of a national Horticultural Society. What would be said of the Linnæan Society if it bought beetles at sixpence, and had a stall in its rooms for retailing them at a shilling?

When Fellows turn to the Society's Exhibitions they cease to wonder that there are no exhibitors, for they find that the prizes are to be dependant in amount upon the money taken at the doors. We have heard of strolling players dividing the entrance money among themselves; but we never heard before of a national Society expecting valuable productions to be conveyed to their exhibitions at a large certain expense and risk, and that the exhibitors, like the players, after certain deductions, were to divide among themselves the shillings taken at the entrances! That this is not a mode of remuneration befitting the Society needs no argument, and that it is not satisfactory to exhibitors is demonstrated by their absence. There were two at the last Chrysanthemum show!

Such a deficiency in the attractions is soon appreciated by the public; and when to this is added the entire absence of judgment in fixing the exhibition days, we hear it observed too often, "We cannot go to-day, nor would it be worth the time and trouble if we could."

The able lecturers who, gratuitously and at no small expense of time, have responded to the Society's request to deliver lectures in the room at South Kensington, have ample reason for complaint. No man likes to have an apparent proof before him, afforded by empty seats, that either he or his subject is not highly esteemed. Yet every lecturer must have been thus benumbed, though the conclusion he drew was not a fair conclusion; for the real causes of such scanty audiences have been the absence of public announcements, and ill-judged selection of times and hours.

The members of various Committees have ample cause for complaint. The Show Committee's circular asking for a reply to be sent by the 15th of October, was not sent at all to many of the Fellows, and to others not until after the first week in November. In another Committee on a subject of taste, meetings were summoned without any hour being named, and reports made without some of the ladies being summoned to the meeting at all. But these are not the worst features in connection with the Society's Committees; for we know of the names of influential members being published as belonging to those Committees though they were never asked to belong to them, and were never summoned to the meetings. Now, no excuse can palliate this. It was a liberty which should be taken with no member of a society; and—whether intentionally or unintentionally matters nothing—it was inducing the public to confide in the Committee having the aid of those distinguished members, though the Committee neither had, nor sought to have, their counsel and assistance.

With these facts patent, will any one wonder that the Society is rapidly decaying? Will any one dare to pen a sentence in defence of such mismanagement? Will the Council not look around and see if there is not some one who, instead of being their pilot and aid, is their misleader and encumberer? Will they still permit the blundering, neglect of details, and inattention to routine, which has so characterised and so offended in the official conduct? Will they, in despite of demonstrations of the Society's decline, still cling to expensive musical contests and such irrelevant extravagances, instead of the promotion of the objects of the Society and the benefit of its Fellows?

If they do so permit, and do so persist, then the decline of the Society will soon ripen to its fall; and it will be ever a subject of sorrow, but of no surprise, to know that vast donations and a noble income have been lost to horticulture, and will leave one more example that wealth only ministers to profusion, and power only gives opportunity for increased folly, when intrusted to the presumptuous incompetent.

TRENTHAM BLACK AND CHASELAS VIBERT GRAPES.

In reference to a notice of these two Grapes in your Number of the 22nd inst., I beg to say that I have them both in a cold vinery.

The Trentham Black is a very strong-growing Vine, and retains its foliage in a green state longer than the Black Hamburgh. With me it has set its fruit much better the second year of training than it did in the first. It does not require much thinning, and is, I should think, a very good trusser. I do not think the flavour so rich as that of the Black Hamburgh; but, then, the Grapes that I have of the latter variety are first-rate. It is, however, exceedingly sweet and good.

The Chasselas Vibert grows weakly, and has taken three years to reach the top of the house. It is, however, a good bearer, and ripens its fruit very early. Its flavour is excellent, and it is a pretty good trusser. The bunches are not large.—M. A., Oxon.

THE NEW ROSES.

I now resume to, I hope, conclude my anatomy of the lists of new Roses, about which I feel more nervous than ever, as I am continually receiving letters from those who say they have trusted to my recommendations for this year's orders, and I should be very sorry to be a blind leader.

PERNET.

53. *Madame Fresnay*.—Very vigorous. Flowers large, well-formed; beautiful lively rose.

54. *Mesdames Sœurs Chevaliers*.—Very vigorous. Flowers large, full; colour of wine lees with a slaty tinge.

55. *Triomphe des Français*.—Very vigorous. Flowers large, nearly full, blooming in clusters. Lively crimson red.

M. Pernet does not seem over-sanguine as to the first of these, only placing it at 15 francs. The second is hardly a colour for English tastes; and the third being nearly full will, I fear, put it in the background.

GUINOSSEAU.

56. *Heliogabale*.—Flowers vigorous, large, blooming in clusters, brilliant velvety red. Very free-flowering.

A. L. BAUMANN.

57. *Madame James Gros*.—Very vigorous. Flowers large, well made, clear crimson, lightly bordered with rosy white.

DEFAUN.

58. *Maréchal Baxaine*.—Flowers medium, cup-shaped, well formed; shaded rose in the inside, carmine outside of petals. Flowering freely in autumn.

H. JAMAIN.

59. *Marguerite de St. Arnaud*.—Very vigorous. Flowers large, well-formed; white, with a blush tinge, passing to pure white.

LIABAUD.

60. *Monsieur Boncenne*.—Very vigorous. Flowers large, cup-shaped, blackish velvety purple.

These five raisers are modest; like single-speech Hamilton, they only give us one production; and I should hope that Jamain, the raiser of *Maréchal Vaillant*, will give us something worth growing again.

Besides the above, M. Eugène Verdier announces the following, of whose parentage nothing is said; and the only information is that he has a part of the stock. I hardly think that one would be justified in looking for much from them. These are—

61. *Ardois du Chilet*.—Slaty purple shaded with carmine.

62. *Charlotte Corday*.—Purplish red; reverse of petals lighter.

63. *Dunois*.—Carmine red shaded with violet. Somewhat like *Vicomte Vigier*.

64. *Forster*.—Imbricated; fine deep red shaded with violet.

65. *John Keynes*.—Scarlet red, shaded with maroon.

66. *L'Abondant*.—Very free-flowering. Fine lively red, with very marked light border.

67. *La Coquette*.—Lively shaded red, violet tinge; three or four rows of outside petals fiery red.

68. *Léonie*.—Currant red; reverse of petals lilac.

69. *William Bull*.—Flowers full, globular; lively cherry red. Superb.

M. Lacharme announces two white Roses which he rightly designates as hybrids of Bourbons and Noisettes, I think

coming from him, that they may be improvements on the white Roses we possess. They are—

70. *Boronne de Meynard*.—Flowers medium, well formed, very fine; pure white.

71. *Madame Gustave Bonnet*.—Flowers medium; form of Centifolia Rose; virgin white, shaded rose and carmine.

TEA ROSES.

72. *Madame Charles* (Damazin).—Very free flowering; flowers very large, full; sulphur yellow, salmon centre.

Maréchal Niel.—Very vigorous; flowers large, globular; deep shaded yellow. Very fragrant.

This last Rose I had the pleasure of seeing at Paris, and I am quite persuaded if it opens as well with us as it does in France that it will be a decided acquisition. It is of the same class of flower as Cloth of Gold, Isabella Gray, &c., having more analogy with the Noisette than the Teas. The colour is very fine, and the shape good.

BOURBON.

74. *Adrienne de Cardoville* (Guillot, père).—Flowers medium, very full, open well; tender rose colour.

75. *Madame Collet* (Liabaud).—Dwarf flowers, medium size; pale blush; free flowering. Good border Rose.

76. *Madame Vaches*.—Imbricated, small flowers; blush rose, passing to pure white.

77. *Marguerite Bonnet* (Liabaud).—Flowers large, imbricated; flesh white.

78. *Miachael Bonnet* (Guillot, père).—Flowers medium; very full; beautiful lively rose.

79. *Prince Napoleon* (Fernet).—Flowers very large, nearly full; fine lively rose.

80. *Souvenir de Louis Gaudin* (Tronillard).—Flowers medium, full, well formed; fine purplish rose, shaded with blush.

Finis! and an end there must be to such wholesale importations, for assuredly this French invasion is becoming alarming; and now where is the selection? I should say Hybrid Perpetuals Rushton Radclyffe, Souvenir de William Wood, Charles Margottin, Duc de Wellington, Duchesse de Medina Celi, Duchesse de Caylus, Madame Charles Verdier, Marguerite de St. Arnaud, Jean Rosencrantz, Triomphe de la Terre des Roses, Xavier Olibo, Monsieur Moreau, Charles Wood, and Souvenir de Bernardin de St. Pierre. In Teas, Maréchal Niel, Bourbon, Adrienne de Cardoville, Miachael Bonnet; and Hybrid Noisette Baronne de Meynard; and I may add a fine crimson Rose of English origin, King's Acre, raised by Mr. Cranston. Whether one is right in these conjectures time alone can tell.—D., Deal.

TIME FOR VINE-PLANTING—MANURING PEACH TREES.

I HAVE recently purchased a few Vines, and been recommended not to plant them in the border until March. I shall feel obliged if you will kindly inform me whether a little quicklime mixed and stirred well in the border to kill the worms, &c., would be beneficial or otherwise to the Vines when planted. The lime is, I should observe, what has been used in gas-making.

I have also purchased a few Peach trees to grow in the same house as the Vines, and being a novice in these matters, should be glad to know if water or liquid manure is to be given during the winter months, and in what quantities?—CESTRIA.

[It matters but little at what time you plant the Vines. If the ground is in good order, you might plant them now, breaking the balls gently so as to disentangle the roots. If not used to it, the best way for you to do this will be to take the ball of earth and roots out of the pots, and then place the ball in a tub of water heated to 60° or so, and then with your fingers wash away all the earth. This will enable you easier and better to disentangle the roots and to spread them out to their full length, and pack them nicely in light sandy soil, from 9 to 12 inches below the surface. When thus nicely spread out and covered with 2 inches of soil, give water at about 80°, then fill up with soil and cover over the ground with about 15 inches of warm litter, and thatch or put on tarpauling to keep out extra wet. So

treated the roots will begin to move during the winter, and be in a good state for meeting the expanding and lengthening buds, and so treated we think the sooner the Vines are planted the better it will be for them. If you cannot give this coaxing to the roots conveniently, we would advise you to take the foreman's advice and keep the Vines in their pots in a protected place until March, and then plant as advised above by spreading out the roots. In this latter case, the cooler the top of the Vine is kept the better, allowing the buds to break naturally. There is a third method which, as you have the house, you might adopt, but for your lack of experience, and by it your Vines would do the very best the first season. Get some crates or shallow baskets of rough woven material—say 3 feet long, 2 feet wide, and 4 inches deep. Place some rough pieces of turf and leaf mould on the bottom, and a sprinkling of light sandy soil, and on these, after pruning the Vines, spread out the roots and cover with rough loam and leaf mould. Set the baskets on the floor of the house, water as needed, and about the end of May plant the baskets at once at the suitable depth in the border, taking care not to injure the tops. You will gain a month's growth by this extra care, and no check need be given. The simplest plan would be to plant any time before spring, and keep the roots comfortable by protection.

The best time to apply quicklime for killing worms in the border will be a week or two before planting, and then the alkali will be gone before the roots come into contact with it. We here allude to common lime or quicklime, such as is used fresh for making mortar. That is a very different thing from lime that has been used in gas-making. Of that we should not think of using any in a Vine-border, as when employed at all it should be by a practical man who knows something of its strength, and its power to kill all vegetation when given in large doses.

As to your Peach trees to be grown in the same house, you do not say whether they are in pots or planted out; but in either case they will need little water during the winter, and that little may either be clear or weak manure water until the buds begin to swell. Then the soil should be moistened, or there is a danger that the buds will drop. In fact, during the winter the soil should never be dust dry, or the same thing will be apt to occur; but when the trees are at rest the soil should be dryish rather than very wet. As soon as the trees push well manure water may also be given freely as they need it. It should, however, be weak and clear, and also varied. Thus a peck of soot and a pound of lime would do for forty gallons, and two pecks of horse, cow, or sheep droppings would do for an equal quantity, but it should stand a fortnight first; and then for the next brewing in either case half the quantity would do. Two ounces of superphosphate, and one ounce of good guano would do for three gallons. A good plan is to use the manure as a top-dressing and pour the water over it, removing the manure and adding fresh as the first becomes exhausted.]

GROWING MANGOLD WURTZEL AND SWEDES ALTERNATELY.

I HAVE in hand about six acres of arable land, and a much larger quantity of grazing land. On the six acres I am anxious, if possible, to grow Mangold Wurtzel and Swede Turnips, year by year, for my sheep, and fattening bullocks. Can this be done without injury to the land by judicious and sufficient manuring? If so, in what shape would you advise me to return to the land, when I manure it, that which I remove from it in my crop? The roots I should propose feeding off the land.

I have not sufficient arable land for a proper rotation of crops, and I am unwilling to disturb any of my tenants. Garden ground produces the same crops year after year without perceptible injury, and I am disposed to think that the same may be done elsewhere, if the right manures, and a sufficiency of them are returned to the soil. I make plenty of farmyard manure.—POSSUM.

[We do not anticipate that you will have any difficulty in carrying out your wish. The market gardeners about Romford, and elsewhere grow Potatoes and Cabbages alternately, always have heavy crops, and use no other manure than that

which they obtain from their own stables, and from the London yards. At Lois Weedon Wheat is grown every year on the same plot. We should advise you to trench the ground, bringing the lower spit to the surface annually. Your farmyard manure will be the only fertiliser you need.]

CHRYSANTHEMUMS.

MR. SALTER'S, VERSAILLES NURSERY, HAMMERSMITH.

THE winter garden here is just now a beautiful sight, the Chrysanthemums, numbering about 1800, being at present in full perfection, and the whole are arranged with exquisite taste, the brightness of the colours, which would otherwise fatigue the eye, being skilfully toned down, so as to produce a brilliant, but not dazzling effect. With this object Oranges, Araucarias, various Ferns, and some other plants are introduced in groups here and there, especially near the entrance; baskets of Woodwardia radicans, and other Ferns are suspended from the roof; tall Scarlet Geraniums are trained on the back wall above the Chrysanthemums; and in front of the Geraniums are ranged fruiting Orange trees in pots. The small oval beds in the centre walk where the banks of flowers recede are chiefly centered with tall plants of Centaurea candidissima surrounded by charming little Pompons, studded with innumerable blooms. Fine as Mr. Salter's annual show has been for several years, that of the present season far surpasses them, and whoever has not seen it can form but a faint conception of its beauty.

Mr. Salter is so well known as the raiser and introducer of beautiful novelties, as to render comment on that head unnecessary, for not a year passes in which he does not acquire some striking novelty out of the thousands of seedlings which he himself raises, independent of the many other sources which his extensive connection enables him to draw from. Of the new varieties of 1864, we noticed last autumn several which were of high merit, and especially Princess of Wales, which appears to be destined long to rank as one of the most beautiful in cultivation. Its colour, a pearly white tinged more or less with rose lilac, according to its age and other circumstances, is most beautiful. Prince Alfred is another noble flower, very large and full, with broad, finely-incurved petals of a rosy purple; also General Bainbrigge, orange amber, and which is already deservedly a great favourite for exhibition. Lord Clyde, glowing crimson, is of a splendid colour, and Robert James, a fine bright cinnamon and orange. Rev. Joshua Dix is another fine show flower, the colour orange red, and the same may be said of Sir Stafford Carey, dark chestnut, with golden points. Besides these we noticed Mrs. Haliburton, a very double sulphur white; Grange Lodge Rival, orange salmon; Lallah Rookh, dark ruby rose; Mrs. E. Miles, bright yellow, a good exhibition flower; Donald Beaton, St. Margaret, Bella Donna, Florence Nightingale, Sam Slick, Pelagia, St. Patrick, and some others.

Still more interesting were the seedlings for 1865, though all of these had not been named, nor would this be done till more had been seen of their character; for Mr. Salter is very careful not to send out inferior varieties, and for one seedling that he retains he often destroys hundreds. Virgin Queen is a large, fine, close flower, pure white; Ranunculus has a very broad petal, crimson, lighter at the back; King of Denmark is a large dark lilac, with silvery back, and is of fine form; and Mr. Wynness, a dark crimson approaching to mulberry, is one of the richest colours we have seen in the Chrysanthemum. Venus, delicate lilac, finely incurved, was to have been sent out last year, but sufficient stock had not been propagated, and it is, therefore, numbered with the new varieties. Mrs. Brunlees, cinnamon, with orange points, is very attractive in colour; and Golden Ball is remarkably high, forming a fine golden orange ball. Two fine rose lilacs exist in Albert Helyer, and Lady Carey, both of which are very large and beautifully incurved, and Pink Pearl, another of the same colour, but shading off to white, promises to be equally fine as a show flower and pot plant. Prince of Wales, mulberry, with a lighter centre, has the petals, or, more properly, florets broad, even, and beautifully incurved. Sam Weller, finely incurved, reddish cinnamon; Hercules, dark, very large and fine for conservatory decoration; Othello, a fine dark mulberry; Margaret Vatcher, bright

rose with a lighter centre; Golden Dr. Brock, a finely-formed amber sport of Dr. Brock; Imogene, lilac shaded bluish, a fine conservatory plant; and Princess Margaret, a very pretty silvery rose anemone, are the principal of the other new sorts for 1865. We must not, however, omit mention of John Salter, which Mr. Salter considers will prove the finest flower he ever raised; as seen by us the colour was a reddish amber changing to amber at the centre, the petals remarkably broad and smooth.

Among Pompons were Lizzie Holmes, a very free and double canary yellow; Lady Dorothy Nevill, bright yellow; Miss Nightingale, a bluish anemone, with a white centre, all of them varieties of 1864, and of older kinds, Capella, dark reddish chestnut, with an orange centre; Fairest of the Fair, a very attractive free-flowering lilac bluish; Madame E. Domage, beautiful pure white; Salamon; Rose Travenna; Mrs. Dix, bluish bordered with rose, very fine; Madame Fould, cream; Danie, golden yellow, and many others.

Many beautiful flowers of less recent large varieties offered themselves to the view at every turning, but being now pretty extensively known, it would be of little advantage to enumerate their names, a few however may be mentioned as useful for particular purposes. Thus—Abbé Passaglia, White Christine, and Her Majesty, make fine conservatory plants, and Cloth of Gold, though ragged, is excellent for the same purpose; Progne, is the only one having the same brilliant crimson carmine colour, whilst White Queen of England, a sport from the bluish kind, is splendid for cut blooms. Beverley, another white, is fine for the same purpose, also as a pot plant, and Lord Ranelagh, Lord Palmerston, Lady Hardinge, Cleopatra, Sparkler, General Slade, Talbot, and Duchess of Buckingham, are adapted for both purposes. The old Quilled White is another kind, which, though not a florist's flower, is late and excellent for forcing and bouquets.

There were besides several of the Japanese Chrysanthemums, brought home by Mr. Fortune and others, such as Laciniatum, fringed white like a Dianthus, and pretty for bouquets; Late Yellow Dragon, a large, coarse-looking yellow; and Grandiflorum and Red Dragon, which were better than the others, and might be useful for conservatory decoration. As many persons are desirous of knowing what kinds are the most suitable for this purpose, we give beneath selections of twenty large-flowering Chrysanthemums, and the same number of Pompons, affording a diversity of colour, and suitable for conservatory decoration.

Large-flowering.—Beverley, White Queen of England, Mrs. Haliburton, Her Majesty, Lady Hardinge, Princess of Wales, Bella Donna, Marshal Duroc, Lord Palmerston, Lord Clyde, Progne, Prince Albert, Sparkler, General Slade, Antonelli, Little Harry, Sir S. Carey, Jardin des Plantes, Yellow Hermine, and Golden Formosum.

Pompons.—Madame E. Domage, Mdle. Mart, Cedo Nulli, Madame Fould, Fairest of the Fair, Lilac Cedo Nulli, Rose Trevenna, Trophée, Adonis, Salamon, Jane Amelia, Requiart, Aurore Boréale, Danie, Mr. Astie, Général Canrobert, Canary Bird, Capella, Miss Julia, and La Rousse.

In the span-roof house adjoining the winter garden were several specimen plants in fine bloom, particularly Jardin des Plantes, and some seedlings, and in the lean-to against Mr. Salter's residence seedling Geraniums, obtained between a Nosegay and a scarlet kind, and which partook a good deal in the character of those raised by Mr. Beaton; also several Centaureas. One of these was the true ragusina, for which candidissima is very generally sold, and gymnocarpa, another, is very useful for winter. We also noticed a variety of Cineraria maritima called compacta, which has the merit of being of dwarf, compact habit, and two pretty Geraniums, one belonging to the Zonale section, with a well-marked horseshoe, and a white flower with a deep rose centre, and another named Madame Barre, of a very deep rose, deeper than Helen Lindsay, and of dwarf habit. A pretty hardy Sedum, provisionally named glaucum from its colour, used in the winter garden and out of doors, forms a pretty and very close carpet, and is well suited for edging beds and covering banks of earth.

Out of doors the borders were gay with Chrysanthemums in great numbers and variety, and though some of them had been exposed to 11° of frost (thermometer 21°), their general appearance was good. It was interesting to notice

that whilst some kinds, as Lord Palmerston and Alma, were scarcely affected, others close to them were much injured.

MR. FORSYTH'S, STOKE NEWINGTON ROAD.

THE high position which Mr. Forsyth has taken in the last two or three years, gives this nursery a claim to more than a passing notice, though it is neither so extensive nor so well known as many others. It is, however, well worthy a visit at this season, when the show-house is filled with large and handsome specimen plants of the best varieties, both large-flowering and Pompons, and, though none too early, when we visited his establishment the other day, we were much gratified with what we saw. The centre of the show-house was occupied by a fine bank of plants, comprising a great variety of colours, and the shelves at the sides were filled with bushy plants, such as he is in the habit of exhibiting. Among these were Duchess of Buckingham, a fine white variety of the current year; a handsome specimen of Golden Christine, but which Mr. Forsyth considered the worst of those he had grown this year; Annie Salter, one of the best and most useful of the show kinds; Alma, 4 feet 3 inches across, and in splendid bloom; Arigena, amaranth, another fine show flower; Rifleman, and of Pompons there were excellent specimen plants of Cedo Nulli, Sainte Thais, and Général Canrobert.

Besides these, in the centre and other parts of the house were Beverley, now nearly over; Plutus, an excellent late-blooming yellow; Forsyth's Golden Trilby, a golden sport of Trilby; Jardin des Plantes, fine; Abbé Passaglia, Antonelli, General Slade, Indian red tipped with orange; General Hardinge, another fine sort of the same colour, with a golden shade, and which is very popular, both for cut blooms, and specimens; Raymond, Cherub, golden amber, with a rosy tinge, a fine late variety; Prince Alfred, and Princess of Wales, which have been everywhere so much admired; Nil Desperandum, Queen of England, and many other well-known varieties.

Of new kinds of 1864, we noticed Bella Donna, Donald Beaton, Empress, Pelagia, Prometheus, very large red; Mrs. Pethers, a rose lilac anemone; Lady Slade, a beautiful lilac pink; General Bainbrigge, a general favourite; Sam Slick, Rev. J. Dix, a fine show flower; Robert James, another very fine flower, with broad petals, beautifully incurved; St. Patrick, Lallah Rookh, Mrs. Mills, and others on which we have already remarked. Among Pompons were Lizzie Holmes, Miss Nightingale, &c.

Besides the show-house two other houses were likewise filled with Chrysanthemums of various kinds.

At the Shacklewel Nursery, where Mr. Forsyth grows his bedding plants, of which he annually disposes of considerable quantities, a low span-roof house 70 feet long was filled with a healthy stock of Tom Thumb, Attraction, and other Geraniums. Joining this is a propagating-house filled with Pelargoniums, and bedding stuff. A galvanised iron tank for bottom heat had just been put in, zinc, which was formerly employed having been worn out in a single year. A span-roofed structure was filled with Geraniums, and several thousands of seedling Lobelia speciosa, the seed of which Mr. Forsyth is very careful in saving true. Another house contained a nice lot of Alma, Flower of the Day, and Madame Vaucher Geraniums, Azaleas, and some Camellias, and several ranges of pits were filled with a healthy stock of Cinerarias, Calceolarias, pricked out in the cold about a month ago, and just rooted, Mignonette for flowering at Christmas, Cytisus, Stocks, &c.

Great credit is due to Mr. Forsyth for the energy and perseverance with which he has worked himself up to his present position, for he owes it entirely to his own exertions, and with such qualities we look forward to his obtaining still greater success in the future.

NORTH AND EAST YORKSHIRE POMOLOGICAL SOCIETY.

I ENCLOSE you a report of a Fruit Committee which was held on the 3rd of November, at Thirsk. I am anxious to call your attention to it, as I think the same sort of society might be established with advantage in other parts of the country, in connection with the Royal Horticultural Society.

On comparing the different varieties of fruit together, the following sorts of Pears and Apples seem to be the most useful for general purposes, to be grown as dwarf standards or espaliers in Yorkshire. Of course there are many others which will do on a wall, but which are uncertain on standards.

DESSERT PEARS.—Louise Bonne of Jersey, Marie Louise, Seckle, Swan's Egg, Aston Town, Comte de Lamy, Gratioli, Easter Beurré, Winter Nelis, Beurré Diel, Knight's Monarch, and Roi de Wurtemberg.

STEWING PEARS.—Catillac, and Uvedale's St. Germain. To the foregoing may be added for some seasons, but as rather uncertain, Beurré de Rance, Gansel's Bergamot, Glou Morceau, Van Mons Léon le Clerc, Beurré Clairgeau, Althorp Crasanne, Beurré Bosc, Autumn Bergamot, and Dunmore.

DESSERT APPLES.—Court of Wick, Court-Pendu-Plat, Ribston Pippin, Pike's Pearmain (early), Golden Pippin, Golden Russet, Alfriston, Claygate Pearmain, King of the Pippins, Margil, Cox's Orange Pippin, and Scarlet Nonpareil.

BAKING APPLES.—Lord Suffield, Dumelow's Seedling, Alexander, Mère de Menage, Large Hunthouse, Large Cockpit, Blenheim Orange, Norfolk Beaufin, Yorkshire Greening, and Kentish Fillbasket.—C. P. CLEAVE, Appleton-le-Street, Malton.

[We quite agree with our correspondent in thinking that local pomological societies would be productive of great benefit. They might report annually which varieties of fruit had succeeded best, and give details of the soils and situations in which each variety attained the greatest excellence in the county. This would be exceedingly useful as a guide to all residents in the locality.—Eps.]

THE NEW AMERICAN PEACHES AT ANGERS.

Name.	Size and form.	Flesh.	Flavour.	Perfectly ripe.	Rivers's report 1863.
1 Bergen's Yellow	medium, pointed	yellow	excellent	Aug. 9	Not mentioned
2 Drindhill	medium	yellow	moderately good	" 12	" "
3 Flewelen	medium, pointed	yellow	good	Sept. 15	" "
4 Gorgas	large, round	yellow	good	" 14	Very large and rich.
5 Lagrange	medium	pale yellow	passable	" 27	Not mentioned
6 Moore's White	medium, round	yellow	passable	Aug. 31	" "
7 Morrisania	medium, pointed	pale yellow	very good	Sept. 14	" "
8 President Church	medium, round	pale yellow	very good	" 31	" "
9 Prince John	medium, pointed	yellow	very good	" 15	" "
10 Pyramidal	small	yellow	passable	Aug. 30	" "
11 Snock Free	medium, round	yellow	very good	Sept. 15	" "
12 Tippecanoe	medium	yellow	bad	Aug. 15	Very large. Good.
13 Van Zandt's Supers	large, pointed	pale yellow	very good	Sept. 13	Not mentioned
14 White English	medium	pale	very bad	August	" "
15 White Globe	medium, pointed	yellow	middling	Sept. 13	" "
16 Denning	medium	yellow	very bad	August	" "
17 Benade	medium	yellow	very bad	August	" "
18 Amelia	medium	yellow	not good	August	" "
19 Susquehanna	medium	yellow	good	August	Yellow. Good

Nearly, if not all the above are clingstones, vigorous from the graft, and free growers, now four years planted, and first fruited, 1864.

- 20 Exquisite Not fruited 1861.
- 21 Golden Purple "
- 22 Canary "
- 23 Honey Small, only one fruit, 1864.
- 24 Stamp the World Described as medium size.

Denning and Benade condemned. Honey, Early Tillotson, Colombia, Asceola, Bordeaux, Bagby's Late, Pine Apple, Henriette, &c., not fruited yet.

Of the last five, Exquisite is described at page 152.

Golden Purple is above the middle size; suture well defined; rich lake colour on sunny side; freestone, melting.

juicy, with a rose-water flavour, red near the stone. Ripe in my orchard-house on the 20th of July.

Canary, ripe July 11th; above the middle size, with a distinct nipple, freestone, flesh yellow, melting, aromatic. Quite a usual southern Peach.

Honey, middle sized, freestone, very pointed, like an almond, pale red on the sunny side, peculiar tropical flavour. Ripe July 21st.

Stump the World, very large, blunt nipple, distinct suture, striped with red on the sunny side, pale red at the stone which parts freely, juicy, delicious flavour. A first-rate Peach; ripe on the 15th of August, very prolific, and deserving cultivation. It makes much wood and might succeed on a warm wall.—I. C. BRÉHAUT, *Richmond House, Guernsey.*

ORCHIDS IN FLOWER IN NOVEMBER.

BARKERIA Skinneri; *Calanthe vestita nivalis*, *C. vestita flava oculata*, *C. vestita rubro-oculata*; *Cattleya bicolor* (three varieties), *C. labiata* (seven varieties); *Coeloglyne agenaria*, *C. speciosa*; *Cypripedium barbatum*, *C. insignis*, *C. Fairrieana*, *C. venustum*; *Dendrobium formosum giganteum*; *Epidendrum vitellinum major*; *Ionopsis paniculata major*; *Lælia anceps*, *L. anceps* (variety), *L. Perrinii*, *L. Perrinii grandiflora*, *L. prestans* (many varieties); *Lycaste Skinneri* (many varieties); *Miltonia candida*, *M. Morelliana*; *Odontoglossum grande*; *Oncidium barbatum*, *O. excavatum*, *O. ornithorhynchum*, *O. papilio majus*; *Phalenopsis amabilis*, *P. grandiflora*, *P. rosea*; *Saccolabium violaceum*; *Sophranitis grandiflora*, *S. cernua*; *Trichopilia tortilis*; *Vanda insignis*, *V. tricolor*; *Zygopetalum crinitum cœruleum*.

The above *Epidendrum vitellinum majus* has been in flower for the last seven months. *Lælia anceps* variety is very fine, one spike measures 4 feet 6 inches in length, with five flowers on it, each flower measuring 5½ inches across; one of the *Lælia prestans* is also very fine, with seven spikes on it, some bearing two flowers on one spike. Mr. Robert Warner, of Broomfield, informs me that it is a very unusual thing to see *L. prestans* with two flowers on one spike in this country.—CHARLES KEMMERY, *Gardener to Thos. Jones, Esq., Ellerslie Villa, Whalley Range, Manchester.*

IMPROVING OLD VINES.

SOME, perhaps, like myself with only one house for Vines, may be benefited by my experience.

The house here is a very old one, with two Vines, a Black Hamburgh, and Black Prince, having stems as thick as a man's arm. Eight years ago they bore bunches so small that it made one quite miserable to see them, and my employer said I might try to improve them.

Being close to the house, and planted in a 12-feet gravel walk, where a border could not be made, I had to remove the gravel and earth to the depth of 15 inches or more without finding a root. Below that the roots were plentiful. I then broke the old earth up with a fork as carefully as possible, to avoid injuring the roots, and had ready a mixture of loam, a little well-rotted dung, and a few bushels of inch bones. Turfy loam from Epping Forest was the kind used. Reading about the same time in your valuable Journal, that some person grew Celery very fine by laying earthenware-pipes under the roots, I thought that was a hint for watering my Vines, so I laid rows of pipes amongst the loam with elbow joints close to the wall, put brickbats around each joint that the water might run out freely, and a lid to the top of each pipe, on which lid we can stand a plant to make all look tidy. I can pour about eighty gallons of weak liquid manure down, put the lid on, and all looks clean.

After filling the walk with the loam, &c., a little above the level to allow for settling, I put the clean gravel on just sufficient to make all neat. Rolling over that part for two or three years afterwards was like rolling over elastic.

The Vines did much better in the following season, and every year since then the wood has strengthened, and the bunches and berries increased in size. I have some bunches hanging now more than a foot long well shouldered, and coloured.

The expense was very little, and quite repaid itself in

the second season. I tried the walk this summer, and found it quite full of roots; but with the pipes I can give them all they want without again disturbing the walk.

Three years ago a friend removed with his master to a new place, where there was a vinery in a very bad state, the bunches few, small, and shanked very badly, the Vines had not been planted more than eight or ten years. He asked my advice, and I told him to carefully take them up and renew the drainage and border in September. He hesitated. I told him it was so stated over and over again in THE JOURNAL OF HORTICULTURE.

He had the same loam, bones, &c., all ready as before stated, took the Vines entirely up, covering the roots with damp moss and matting, renewed the drainage and border, carefully planting the Vines, watering the roots, and gently syringing the leaves morning and evening, and made a little fire. One Vine only drooped, and that a Muscat.

In the following season the wood was short-jointed and promising, but there was not much fruit, but that we could not expect. In the last two years the crops have been very good, both in bunch and berry. He is greatly pleased, and his master well satisfied, so accept the best thanks of myself and friend for the benefit we have obtained from your valuable Journal, and often when I read I thank you and all your correspondents for the pleasure and profit I receive.—W. C.

MESSRS. FRANCIS & ARTHUR DICKSON AND SON'S NURSERIES, CHESTER.

WHEN I gave a notice of these nurseries some time since, I stated that I had been unable to go over the forest and fruit tree grounds. A friend has, however, supplied the deficiency, and the following brief account will perhaps be interesting to those of your readers who care for such things, for these grounds form one of the most extensive depôts for forest stuff, as it is generally termed, in the kingdom.

"Some eighty to ninety acres of ground are devoted to the cultivation of forest trees alone. In addition to the twelve millions of seedling Larch (not Laurels, as by an error of the press it was made to read), alluded to in THE JOURNAL OF HORTICULTURE of October 11th, there are also to be seen from five to six millions of transplanted Larch, varying in height from 18 inches to 4 feet, healthy, vigorous, and clean-grown stuff. Thorns or Quicks are grown to an equally large extent, the stock being of very fine quality; and the same may be said of large quarters of Scotch Fir, Spruce, Spanish Chestnut, the Austrian Pine, also *Pinus laricio*, both of these last-named trees being very much used in the formation of plantations. They are both very valuable quick-growing Pines, admirably adapted for exposed situations. Then there are almost endless quarters of Hazel, Black Thorn, Ash, Beech, Birch, Horse Chestnut, Elm, Silver Fir, Hornbeam, Poplars, Sycamore, Willows, &c., offering to planters an extensive range for the selection of their materials that only great establishments like the Upton Nurseries can offer.

"It would seem that one other especial feature of the out-door nursery work is the production of plants suitable for game coverts, underwood, &c. For these purposes there is annually raised a very large quantity of *Berberis aquifolium*, which is much sought after for the formation of coverts, the berries being excellent food for pheasants, while the rabbits will not bark the plants. For the same purpose the Canadian Gooseberry—the stock of which, judging from the catalogues periodically issued by the large nursery firms, seems to be almost exclusively in the hands of the proprietors of the Upton Nurseries—is also extensively grown for coverts; the fruit, which abounds on the plants, is readily devoured by game, while the plant grows very vigorously, and spreads with amazing rapidity. It only requires to be more generally known to be extensively employed for this purpose. For the same end are also grown Black Thorn, Hazel, Hollies, Laurels both Portugal and common, in large quantities, and of all sizes and stages of growth; *Rhododendrons*, Snowberry, Sweet Briar, Privet, all of a superior character to what are generally seen. *Pinus pumilio* is also an excellent plant for coverts, as it grows very densely, and game are fond of seeking it for shelter.

"The culture of fruit trees is another especial feature of

the Upton Nurseries. They are grown to a large extent, the variety of the sorts being in keeping with the area of their cultivation. Of standard-trained trees there are strong and handsome specimens of Apples, Pears, Cherries, Peaches, Nectarines, and Apricots. Of dwarf trained trees the quantity is very considerable, including Peaches, Apricots, Nectarines, Plums, Cherries, and Pears. The Peaches and Nectarines are as fine and handsome specimens as could be wished for. The growing taste in favour of fruit trees in the pyramidal form is apparent here by the extent to which they are cultivated. They are more ornamental than standard trees for kitchen gardens. The fruit is screened to a great extent from the force of the wind, and the trees occupy less room in the garden. There were here capital specimen trees of this shape of the best varieties of Apples, Pears, Plums, and Cherries. The fruit tree department also comprises Gooseberries, including all the best Lancashire show varieties, as well as sorts for kitchen purposes and preserving; Currants in extensive variety, Strawberries in all the leading kinds, Raspberries, &c."

Such are my informant's words; and I am sure, if this department equals in completeness the ornamental portion which I visited, it must be exceedingly well worth a visit.—D., Deal.

LILIUM LANCIFOLIUM CULTURE.

In your Journal of November 15th, in an article on the cultivation of the Japan Lily, *Lilium lancifolium*. Mr. Earley recommends January and February as the best times for potting it for successional flowering; but I think either of the above months much too late, as the roots are always active, consequently these should be potted as soon as the foliage is ripe.

I potted half a dozen large pots the first week in October, and I hope by the time at which Mr. Earley recommends potting, to have the pots full of roots, and very strong stems coming through the soil.

By this treatment I frequently have twelve or fifteen flowers on a stem, and should I want the plants in bloom by the first week in July, I can easily do so by placing them in a cool, airy place in the conservatory all the summer, whereas if I want them in August or September I have only to place them in a sheltered spot out of doors as soon as the weather will permit—say early in June.

They will require shading or to be placed under the shade of trees for a few days which amounts to the same thing. I mention my differing from Mr. Earley, because I do so from long experience in the cultivation of the above beautiful flower, and I am thoroughly convinced that half the miserable specimens often met with, are the results of late potting, and neglecting to soil up the roots thrown off the stems in the early stages of their growth.

I have this season ripened a quantity of seed of a fine variety of *Lilium lancifolium rubrum*, impregnated with the pollen of *punctatum*, and should be obliged by a few hints on the management of seedlings from any of your correspondents. I thought of sowing the seeds in a frame on a south border, in some well prepared ground. If I do so, with liberal treatment how long will it take me to flower them? —W. BROWN, *The Gardens, Elmdon Hall, near Birmingham*.

I HAVE read with pleasure the letter from your correspondent, Mr. W. Earley, on the cultivation of that most interesting bulb, *Lilium lancifolium*; and although I may agree with him, so far as concerns the production of specimen pots full of bulbs and their management, I totally disagree with him if he means to convey, that by his mode of treatment the plant and flower can be developed so as to show their beauties to advantage. To do this every bulb must be planted in a separate pot and flowered singly, carefully avoiding that most objectionable practice of staking, which I consider quite unnecessary. To my fancy it quite destroys the natural appearance of a stem, which has a most imposing effect when grown straight and free from support. I will now state the results of some years' experience which may be read with pleasure by some of your correspondents.

I have grown small *Lilium* bulbs to the weight of 1 lb. each, and which in three years produced flower-stems

5½ feet high, perfectly straight without the assistance of a single stake or support, and each bearing sixteen or eighteen blooms of such size that each petal measured in many cases 1½ inch across.

I have never tried to keep up a succession of flowers, but, as in any large collection some will flower earlier than others, I was quite satisfied to plant all my bulbs at the same time, and take the chance of their lasting quite long enough, at least until such time as the room in my small greenhouse was required for some other favourite. I commenced to plant at Christmas after having carefully examined the roots which I had always shaken out of their pots a month before. I removed all decayed roots and scales, of which latter very few ought to appear if the bulbs are healthy.

The soil which I have found most suitable for my purpose is an equal portion of fibrous peat, leaf mould, and maiden loam or well-decayed turf, with a good admixture of silver sand. Each bulb, according to its size, is planted in a pot 5 or 6 inches in diameter, well drained with some broken flower-pots, over which I place a layer of moss. I plant, not as Mr. Earley recommends, with the top of the bulb over the top of the soil, but well below the surface, bedding the bulb and covering it with silver sand, as a fancier would a valuable Tulip or Gladiolus. I give them, when planted, a good soaking of water, and then allow them to remain almost without any on the floor of the greenhouse until they fairly start into growth—say about 2 or 3 inches. The very fact that the natural habit of the bulb is to throw out a regular wig of roots at the point from which the stem starts, ought to be sufficient to illustrate the necessity of keeping it well under the surface, for I believe it is not from the roots of the under portion of the bulb that the flowers are nourished, but from those over the bulb at the base of the flower-stem.

When they reach this second stage, I shift each bulb into a nine-inch pot drained as before, taking care to plunge the plant still deeper; but being sure to leave at least 2 inches at the top of the pot for top-dressing in June. This top-dressing consists of good fresh soil mixed with well-decayed cow manure. These Lilies will bear good rich top-dressing. Manure mixed with the soil will do more or less injury to the bulb, and every particle of what is used until June should be as fresh and free from any decomposed matter (except the leaf mould), as possible.

After the final potting I place the pots on a sheltered gravel-walk in a southern aspect, guarding as far as possible against worms and slugs getting under the pots. I syringe every morning and evening, and never let the soil become quite dry. By turning the pots carefully towards the light when the plants show any inclination not to grow quite upright, I have never had occasion to stake them. By this treatment they will grow with beautifully polished leaves down to the edge of the pot, and will repay the trouble they may occasion up to the time of placing them in the greenhouse for flowering. This time I estimate by the size and condition of the buds, which ought to be well and fully formed before housing.—JOHN COTTER BEALE, *Cork*.

BACK WALL v. RAFTERS OF AN ORCHARD HOUSE FOR VINES.

WILL a Black Hamburgh Vine do equally well, bear as large Grapes, and come as early to perfection planted against the back wall of an orchard-house, which wall is slated, as under the rafters of the same house, the Vine being planted in this case in the front border? The first plan I prefer, as the Vines under the rafters shade the fruit trees so much. If planted against the wall, I suppose there is no better plan than to let them grow perpendicularly, and train the laterals at right angles.—A. B.

[If the trees in the front part of the orchard-house do not keep the light of the sun from the back wall, the Vine will not only do as well against that wall as if trained up the rafters, and but for the slate-facing of the wall the Vine ought to ripen its wood and its fruit earlier. If there is any risk of the wall becoming too hot, you could keep the stem half an inch or an inch from it. The bunches will be shaded sufficiently from the foliage. You might cover the whole of

the wall with Vines, and have low fruiting plants of other kinds in your front border.

Your White Grape is the Chasselas Musqué. To prevent cracking the soil should be kept rather dry as the Grapes approach to ripeness.]

MANAGEMENT OF BEDDING PLANTS.

NOTWITHSTANDING the very dry weather we have had this last summer, my flower garden has been one of the gayest in the neighbourhood; so much so, that it was the constant remark of my friends, "How gay your garden is! I have not seen any plants look better than yours this summer."

Now, how did I gain for my garden this celebrity?

First, I took great pains to get my plants into a healthy state before they were bedded out, neither overluxuriant nor stunted by hardening off, as one so often sees bedding stock at the beginning of May.

Secondly, After the first three weeks I gave no water at all. Thus am I more strongly than ever confirmed in the opinion that, in order to make bedding stuff do well and have a gay appearance to the garden throughout the summer, you should be particularly careful to have it in a good, healthy, stocky-growing state before planting out, and after it has taken good hold of the ground to withhold watering.

In dry weather watering plants in the ground, unless it is done in the most copious and thorough manner, does more harm than good, as it only draws the roots to the surface.—G. M.

PLANTS ON TRELLISES IN STOVES.

THERE are few persons able to afford a stove, or as some would term it, a tropical greenhouse, who would not like to have some creepers or twining plants in it, these being either trained around pillars, or upon trellises. Without mentioning the more rare and expensive kinds which are only sought after by the few, I wish to make some remarks on the more common and useful. Of this class some grow plants that do not flower freely, or which if they bloom do not afford a decided contrast between their foliage and their flowers. Some of the Tacsonias grow very freely, and when allowed to run will flower pretty well; but most of them are not all that is desirable in the colour of the flower, a circumstance which is much against them; but diversity so far from being an objection, should be sought for where there is room.

Another point worthy of consideration in connection with such plants, is that they should not be overcrowded. We all feel a certain degree of reluctance to cut away in the early part of the season whatever might add materially to the adornment of our houses. Sometimes this feeling is indulged in too far, and where the space is limited many of these strong-growing plants will exceed their proper limits if not attended to in time, and judiciously managed.

At whatever season this class of plants flower, I have found it a good practice when the flowering is nearly over for a time, to give them a good pruning-in, always being careful to remove as much of the old wood as possible, as it offers facilities for the lodgment of insects and their eggs in the fissures of the bark. On such occasions examine the plants well wherever they touch the pillar or trellis, for enemies are often found lurking in such places. When giving the plants their yearly cutting-in, and cleaning, I have found it a good plan to paint the pillars or trellises against which they are trained. When this is done yearly one coating of paint will be quite sufficient at a time. This always gives the house a healthy, orderly, and clean appearance. I often wonder that these little details are not more regularly attended to in places which are otherwise highly kept, and I venture to affirm that such details are far more carefully attended to in commercial establishments, where we may suppose that everything is done with a view to the greatest economy, and to secure the largest returns.

Having made these general observations, I may remark that there are two plants in a stove here which have this season been splendid for months. The house is span-roofed, about 24 feet long and 14 feet wide; at one end is planted in a prepared bed under the flooring, *Passiflora racemosa*

coccinea, and at the other end is a *Bignonia*, which has run over the whole of the roof. It is tied to wires about 1 foot under the glass, and from its appearance it is well named *incarnata*. The flowers are produced in good-sized clusters, and the plant has been already two months in flower, and is still very full of bloom.—G. Dawson.

LECTURE ON "AILANTHI CULTURE."

THIS was delivered by Dr. Wallace, on the 10th ult., at the Literary Institution, Colchester. The interest which the subject possesses, and the probability that at no distant day Ailanthi culture may become one of the staple trades of the country, justify us in giving a more extended report of the lecture.

The Lecturer commenced his remarks by congratulating himself, that in the subject which he had selected for his lecture he had the peculiar privilege of unfolding a new page of natural history, and of introducing to their notice a tree both beautiful and valuable, and an insect recently acclimatised in Europe, elegant, graceful, and larger than any of our English species, easily reared and domesticated, the instrument of a pleasant pastime to the youth of both sexes, yet capable of contributing to our industry and wealth by a system of cultivation, to which was given the name of Ailanthi culture. This system, as yet in its infancy in Europe (the so-called centre of civilisation and commerce), had been practised for many years in China, Japan, and the Eastern Archipelago; and as the subject of Ailanthi culture, or the production of silk from the cocoons spun by caterpillars feeding on the leaves of the *Ailanthus glandulosa*, had up to this time attracted no marked attention in England, and as he had for many years devoted his spare time to the study of insects, and more particularly of butterflies and moths, he determined when he settled in Colchester, to embrace the first opportunity of investigating this new industry, and great was his astonishment when the opportunity he had so long coveted lay at his feet, for in his own garden he found a fine and beautiful tree, some 50 feet high, as well as a number of others in the town and neighbourhood. Dr. Wallace then went on to describe the tree, which was first introduced into England in 1751 (the seeds of it being sent to the Royal Society of London, by a missionary in China), but although its cultivation extended very rapidly, it was only used for ornamental purposes. The tree, he said, was of a remarkably hardy nature, quick of growth (as he showed by some beautiful specimens of this year's shoots), thrived admirably upon almost any soil and in any atmosphere, produced a remarkable foliage both for its size and the peculiarity of the odour which it sent forth, and was more easily propagated than any other plant. If no further use could be assigned to the tree, its culture was well worthy attention for ornamental purposes, and purposes such as that to which other wood was applied, but it was an especial object of interest as possessing another property of untold value—viz., the juices of the tree were converted by the natural chemistry of a caterpillar which fed upon the leaves into a silken or gummy thread, which, unravelled from the cocoon, and twisted, spun, and woven by the hand of man, became a fabric capable of clothing the human race. Having briefly noticed the history of the *Bombyx mori*, or the Mulberry silkworm, and especially demonstrated its unsuitability to the climate of England, he proceeded to lay before his audience the claims of the *Bombyx cynthia*, or the Ailanthus silkworm, a few living cocoons of which were sent to Turin by the Abbé Fantoni, a Piedmontese missionary in the north of China, and from thence found their way to Paris, where in June, 1857, the first living specimen of the butterfly saw its light in Europe. Since that time, it having been discovered that the leaves of the Ailanthus tree were its natural food, the *Bombyx cynthia* had spread over Europe and its colonies, and made its first appearance alive in England in 1861 or 1862. Dr. Wallace, aided by specimens which he had at hand, then gave an interesting description of this wonderful insect, commencing with it in its first stage, the egg, and tracing it through its several changes till it spun its cocoon, and finally emerged a beautiful insect, some extraordinary specimens of which he exhibited. Several interesting peculiarities of the insect were related, and par-

ticularly the extraordinary means which the caterpillar used to prevent the accident of the leaf upon which was the cocoon being blown off the tree; and the lecturer devoted some time to a consideration of the best mode of raising the insects. Upon the commercial aspect of Ailanthi culture he declined to give a decided opinion whether or not it would "pay," for the time since it had been tried was too brief to have established the value of the silk in the market, or, indeed, to introduce it in any bulk into commerce; but this he could say, that as regarded the tree in 1861 in France more than a million trees were planted and more than a hundred millions of seed sown (sufficient to plant fifty thousand acres), and that the demand for eggs of the insects exceeded the supply. The value of the Ailanthine silk as sent from Japan and China was well known to consist in its extreme durability, but it could not vie with the Mulberry silk in lustre and gloss. It was not desired, he said, to set forward Ailanthi culture, as likely to supplant agriculture or even sericulture as regarded the Mulberry tree, but rather to supplement both, for Ailanthi culture if successful, would only be applied to those lands which from poverty of soil or other causes could not be otherwise cultivated,—viz., all sandy or sterile soils, railway banks, moors, mosses, bogs, rocky and stony ground, such as under cliffs, mountainous regions, sandy marshes and along the coast. It would not either displace Mulberry silk, for having a different texture, appearance, and inferior gloss it would be used for purposes quite distinct from those to which that silk was applied. Upon the question of cost he quoted statistics of the culture of the tree and the rearing of the worms in France, and showed that there a profit had been derived of £21 per acre upon ground otherwise valueless.

Dr. Wallace then concluded as follows:—I have now very feebly and inadequately (and omitting, for want of time, many points of great interest) laid before you, as it were, a leaflet from the great book of Nature, as yet undeciphered in England. Numerous as are the benefits we reap from her, there yet remain, even at our feet, many of her secrets uninvestigated many undiscovered sources of health and industry. Pisciculture as applied to our British sea fisheries, to the salmon, and to the oyster—sericulture on an extended basis, not confined to a single species as heretofore—the return of sewage to the land—the introduction of new species of living creatures from distant parts, suitable to our requirements, and susceptible of acclimatisation—these and other problems are presented to us for solution in the decade 1860-70. It is the duty of man, by patient investigation, to arrive at a correct interpretation of Nature's laws, and apply them successfully to his own benefit. The process is a slow one, and many mistakes must be made before the truth is elicited, but success in the end is sure. And with reference to this novel industry to English and European Ailanthi culture, it is worth while to note the remarkable events which have heralded its dawn. One hundred and ten years ago the tree was acclimatised in Europe, but not for sericulture. Had the silkworms then come over with the tree, they could not have been reared for many years to come for lack of foliage; but sufficient time was required for the tree first to become indigenous in Europe, Canada, Australia, and to manifest its reproductive and hardy nature. Then came a severe epidemic in Europe among the varieties of the Mulberry silkworm, inducing the proprietors to send out into the original silk-growing districts, India, Japan, China, for new and healthy kinds. This alone was possible by the aid of missionary enterprise: without the help of those pioneers of religion and civilization the Ailanthus silkworm would never have reached Europe. Various coincident movements in China and Japan threw open these countries to European research; the Ailanthus silkworm is discovered and sent to Europe, and the Ailanthus tree is at this time acclimatised, and a abundant food therefore was now ready for the silkworm on its arrival. Then came a crisis in the cotton trade; the American war put a stop to our supply of cotton; substitutes were sought in every direction, and Ailanthi culture assumed at once a more important appearance; and not merely Ailanthi culture began to be investigated, but other species of cocoon-forming insects producing silk of hardy habits, and susceptible of acclimatisation in Europe were sought after. Thus the dream of the 14th century, which James I. vainly strove to

realize, is on the point of completion. Fortunate will it be for England, fortunate indeed for Ireland, if land, hitherto valueless, can be so tended as to furnish, with easy care and slight cost, a tissue warm and durable, and fit even for the poor man to wear—fortunate will the women and children be if another healthy industry be open for their nimble and yet tender fingers. I cannot but be struck with the remarkable chain of events which has heralded these new projects, and I feel confident that at no very distant period European sericulture will rank high amongst industrial products. (Applause.)—(*Essex Gazette*.)

MINLEY MANOR.

THE SEAT OF RAIKES CURRIE, ESQ.

Among the many country residences which have sprung up of late years and become interesting in a gardening point of view, this must take a high rank, particularly when we consider that whenever the fruit from this garden has been shown at our great metropolitan exhibitions during the last three seasons, it has invariably either taken prizes or been adjudged equal to that from other first-class gardens.

After a long drive on a glorious September day, a friend or two and myself entered by one of the new lodges. The drive from this is wild in the extreme, the whole country as far as the eye can reach is hill and dale, covered with Heath and here and there a few patches of Firs bending before the wind. Along the sides of this new drive were fresh-planted Rhododendrons and American plants, generally with a backing of Larch, Spruce, &c., for shelter, which must be very necessary, for it is scarcely possible to find a more exposed situation so far south. At one of the turnings of the drive we came in full view of the château, as, I suppose, I must call it from its architecture being the pure old French. If the colour had been grey instead of red, it would have been easy to have imagined oneself wandering among the hills of Normandy. Its campanile with long steep slated top, the high almost perpendicular roof, and hanging bartizan, have an un-English look; and the barren situation would have made many pause before they chose such a site for a mansion.

Having found Mr. Meads, the gardener, he conducted us first to the range of houses, which consisted of seven divisions, all of the common lean-to form. Entering from the east end the first division we came to was a late Peach-house with a good sprinkling of fine fruit still upon the trees. Then followed the early division from which the fruit had been gathered in June, and the trees were covered with green healthy leaves, both front and back. Next to this was the early vinery, in which were cut the Black Prince bunches that tried the veteran Grape-grower, Mr. Hill, at the Regent's Park June Show, Mr. Meads' bunches being heavier by 2 ozs., the three bunches weighing 8 lbs. 10 ozs., and Mr. Hill's 8 lbs. 8 ozs.

Next to this is a Muscat-house, and such Muscats! I am certain that it would have been possible to have picked out twelve bunches without finding their equal in any one house! Some of them must have been 6 lbs. in weight, and judging from the weight of some that had been cut, few of the twelve were under 5 lbs. The house is 17 feet long by 15 feet wide, and there is a Vine to each rafter, carrying eight bunches. The Vines were planted four years ago last June, and thirteen months after planting the Grapes from this house gained the third prize at Kensington. The berries of these bunches were large and plump, and of a clear rich amber colour. Joining this is the central-house, which is used as a greenhouse, and in which there is a Vine carrying thirteen bunches to each rafter. Two of the bunches taken as an average of the rest were found to weigh, one 4 lbs. 3 ozs., the other 4 lbs. 5 ozs., the whole being beautifully coloured. This house is 30 feet long and 17 feet wide. Next to it is a vinery 35 feet long and 15 feet wide, wholly planted with Black Grapes. The average crop was ten bunches on each Vine. Some bunches of Muscat Hamburg here were very fine specimens of this precious variety. Some of them must have been of a good weight. (See account of the October Exhibition at South Kensington, at page 328.) It must be remembered that the Vines were upon their own roots, and that the Grapes then shown were

DINORBEN HOUSE.

In times gone by it was usual to look for good gardening only in retired country places, where the smoke of factories and the dust of much-used thoroughfares never found their way, and when many gardening requirements, especially for forcing purposes, were only to be had in such rural retreats. Oak and Beech leaves for supplying bottom heat and subsequently furnishing leaf mould, were only to be had in quantity in places where they grew, and many other things wanted in a garden, as stakes of all kinds, were only to be obtained where grown. However, times have altered; the most bulky commodities are removed long distances with ease and economy, and the benefits of one neighbourhood are brought home to another. Facilities for gardening are now as much at the command of the suburban dweller as of those further removed; and we often see villa residences in fashionable neighbourhoods possessing all the requirements of country places of longer standing. A plot of ground of no great extent is made to combine park, pleasure ground, and garden; and the natural features of the locality being often judiciously blended in, the whole frequently presents effects that may be copied elsewhere. Amongst such suburban dwellings we now and then meet with some which claim a higher position alike for their extent and the taste and skill displayed in their management or arrangement. Conspicuous amongst these is that to which I now call attention, and which from its many artistic features will well repay a visit.

Dinorben House, the residence of — Reed, Esq., is beautifully situated on the slope of a hill a little distance from Tunbridge Wells. The site of the mansion is the side of one of those eminences which give the district around this fashionable town so richly varied an aspect. The house itself is new—in fact it may be said to be still in the builder's hands from the great number of workmen about it; but when finished it will no doubt present a noble aspect, and for many generations remain a monument of the taste of its founder. It is hardly my province to enter upon the architectural features, but I may state that the mansion is faced with Caen stone of the best quality, which, as every one knows, is the most suitable for the highest description of decorative work. I need hardly say that such has been largely introduced without at the same time running into any of the superfluities which defeat the purpose of ornamentation, and of which in the present age we have certainly many examples; but here a sufficiency of plain surfacing has been reserved to give solidity to the whole, while ornament where really wanted has been furnished with no sparing hand. The mansion, which faces the south-east, is approached from the contrary direction by a carriage road making a curve round the high ground at the back. The entrance-gates, which are very handsome, open from the high road leading from Tunbridge Wells to Pembury. The width of this road gives no little importance to the villas and mansions to which it affords access; while the scrupulous cleanliness of the whole, the salubrity of the air, the picturesque scenery, and, certainly not the least, the fashionable company by which the various tenements are occupied, all tend to give this district an appearance of wealth which only the higher class of watering-places present. The example set by the proprietor of Dinorben House has evidently had a great effect in inducing others to build in the same neighbourhood, and mansions of greater or less claims to notice are rising in various directions.

As I have just remarked, the mansion faces the south-east, and is sufficiently removed from the highway to secure the requisite degree of privacy. The ground at the back of the house, now in a transition state, will doubtless hereafter be rendered attractive by the many valuable trees removed there, Mr. Reed having for years been an extensive purchaser of fine specimens of Pinuses and other trees; and some good examples of successful transplanting were pointed out to me, amongst others was an *Araucaria imbricata* about 35 feet high, which had been three times transplanted in the last seven years. This, however, was not on the plot of ground alluded to, neither had the various removals which

the tree had undergone been beneficial to it, although its appearance was better than could have been expected in the case of a tree which had been so often subjected to such an ordeal.

Between the mansion and the high road is situated the kitchen garden, in which are some good, useful hothouses. The Grapes are particularly fine; in fact, I should say by the appearance of the Vines, that the soil of the neighbourhood seemed better adapted to their well-being than most of the mixtures that are compounded at so much cost elsewhere. A very short distance from Dinorben House is the garden whence Mr. Drummond sent some remarkably fine Black Hamburg and Muscat Grapes to the London shows two years ago, winning the first prizes in his class; and when I state that those at Dinorben House were scarcely inferior, I need say no more in their favour. The trees and other things in the garden were also good, and a conservatory adjoining the mansion was well furnished with flowering plants; but the principal feature of the place was the picturesque grounds fronting the mansion, and stretching a considerable distance to the right and left of it.

The mansion being on a ridge, the descent ends in a valley, the ground rising again on the opposite side. In this valley the spirited proprietor has at great cost formed a fine piece of ornamental water of some three or four acres in extent, and so contrived as to present a more natural appearance than most artificial sheets of water. A judicious disposition of trees and shrubs about it, with a very large amount of excavation, have rendered it as a whole as highly ornamental as its limited size will admit. The ground at the opposite side of the water has likewise not been forgotten in the liberal disposition of shrubs and trees, while the more dressed side nearer the house has been rendered highly interesting by the excavations and embankments, rendered necessary by the artificial damming up of the water, having been tastefully formed into rockwork. This has not been frittered away into whimsical combinations, of which we see so many examples, but has the more plain and solid appearance which natural scenery in an undisturbed state presents at places to our view, the only difference being in the class of plants which are grown. These consist of a liberal quantity of Pampas Grass, *Cotoneaster*, *Juniperus*, double *Furze*, on the higher and drier places, and many other plants, with some weeping deciduous plants overhanging the whole. In one of the groups I noticed a fine specimen of *Aralia* in beautiful flower, and as shrubs flowering in October are far from numerous, it would be well if those intending planting would secure plants of this pretty shrub, which, together with *Ligustrum japonicum*, and some others, form fine objects at this season. Returning from this digression, I may observe that the rockwork and its accompaniments formed a pleasing object by the edge of the water; and where this emptied itself into a lower level a waterfall was provided, and the water was subsequently conveyed through other channels to an artificial basin, forming a feature that will be described hereafter.

I have said that considerable addition is being made to the mansion, and numbers of workmen were busily employed. A large force was also engaged in removing earth immediately in front of the house, preparatory, I believe, to a terrace with balustrading, &c., being formed, and probably below this a geometrical garden, but of this I am not certain. Operations are going on over a considerable part of the space between the mansion and the shrubbery forming the screen-work to the rockery at the extremity of the lake. Eastward, however, of this there was a large space which had been planted some years, and the health and vigour of the trees told that the treatment they had received, had been to their liking. The natural inclination of the ground being to the south-east, an avenue of Deodar Cedars formed the extreme eastern boundary of the dressed ground in that quarter, the ground descending in a somewhat uniform fall of, perhaps, one in eight or nine, for about two hundred yards to the bottom, where a handsome basin received the water that passed from the lake above alluded to, which in some unseen

manner entered and passed through the basin, keeping its water at all times pure and fresh. The basin also contained a piece of sculpture said to be of some artistic merit, and like others of its class, the fountain could be made to play from a supply furnished by artificial means, but without this its position, and the fine avenue of Deodars pointing to it, gave it a fine appearance. The ground rises on the opposite side from the basin, and the avenue ending there, a summer-house with another shrubbery formed a very good termination. The summer-house or grotto being slightly elevated, the rising ground with the two lines of fine trees looked remarkably well, while the mansion and sloping ground in front of it was also seen to great advantage.

From this point there was another walk skirting the other side of the pond. It was margined by shrubs, and had, I noticed, an edging of Berberis, or Mahonia, as it is often called. Some other walks in the same neighbourhood were edged with that very useful plant *Cotoneaster microphylla*, but I must not pass over the fine avenue of Deodars without again calling attention to it, and the adaptability of the tree for the purpose. Those here alluded to were nearly of uniform size and appearance, 15 or 18 feet high, perhaps, and in their present condition with the beautiful glade of turf between them (no gravel), they formed a feature that cannot well be too often copied; the only fault, perhaps, but which it is likely will not be found out for twenty years yet, is that the avenue is too narrow. Without measuring it, the width did not appear more than 45 feet, which might, perhaps, have done for Wellingtonias, or some deciduous tree intended to spread at top, but it is not sufficient for Deodars. A short time ago I saw a case of the same kind with Cedar of Lebanon, which had been planted about the same distance apart, and after a growth of about thirty years, they interfered very seriously with the gravel-walk between them, several of the branches meeting. Now this ought never to be the case with Cedars, as their beauty consists in our being able to survey them in their entirety, without mutilation of any kind. Nevertheless, for many years this will continue to be a noble avenue, and it, and the other fine trees of the choicest species of *Pinus* with which the lawn is interspersed, exhibit what skill and enterprise can do in a limited period. I believe the formation of the grounds, together with some other artistic work, is from the designs of Mr. Marnock, while the good keeping of the whole, where not invaded by alterations going on, reflected great credit on the worthy gardener, to whose kindness I am indebted for a sight of a place remarkable for the rapid progress it has made in the last few years, progress no doubt facilitated by the kindly nature of the soil. This seems to be of that intermediate kind which will grow American plants and other shrubs as well as trees. The influence of the climate has also, no doubt, something to do with it; but the great moving power no doubt is the persevering energy of the proprietor, who it is to be hoped may long live to see the perfection of objects of his own raising, and in his declining years witness the advance to maturity of many of those pets which all who are fond of out-door gardening surround themselves with, while another and another generation after that may look with admiration on the noble specimens of Wellingtonia, and other trees, and be told that these fine trees were planted, and the noble dwelling adjoining them erected, in the middle of the nineteenth century.—J. ROBSON.

ROSES IN THE NORTH OF SCOTLAND.

It may be interesting to know how certain Roses succeed in this northern climate: I beg, therefore, to say a few words respecting some of the varieties I have in cultivation; but in the first place it will be as well to describe the soil and situation in which they are grown.

The ground is what may be called a good, free, working soil, of a darkish colour, rather light than heavy; the situation, chiefly for the sake of convenience, my time being limited, is in front of my cottage on a border facing the south, to which the ground slopes about 1 foot in 5. The soil is of good depth, and being on the gravel is naturally well drained.

Before beginning to particularise them I may state that, out of sixty or seventy varieties which are now growing in my small garden, and the whole of them were selected at random as far as their suitability for northern situations was concerned, I find that there are very few, if any, that will not do well with proper care and attention, especially if budded on the Manetti, and planted deeply. My young plants, none of them above two years old, produced blooms this season which were admired by all who saw them.

From Gloire de Dijon and Souvenir de la Malmaison (both in bud, with many others, at the present time), I cut blooms which measured 5 and 5½ inches in diameter respectively, without a faded petal, and with a freshness of colour I never saw surpassed in England, if, indeed, equalled; others were equally good, such as Comtesse de Chabillant, William Griffiths, Madame Boll, Baronne Prevost, Madame Vidot, Anna Alexieff, Louise Odier, and many others; amongst which the Noisettes, Celine Forestier and Triomphe de Rennes were most beautiful, although only planted last spring. The dark Hybrid Perpetuals Souvenir de Comte Cavour and Triomphe de Lyon did not do quite so well; although the plants were quite healthy, their flowers did not open freely. Prince Camille de Rohan, I believe, will prove a good Rose for the north; it is a fine grower, and in colour very rich and distinct: with me it was almost black. Empereur de Maroc and Cardinal Patrizzi have also done very well, as, indeed, have all the Roses in my collection with the exception of a few grafted plants, which I find are not at all suited for this locality, they may as well, and much better I think, be on their own roots at once. For instance: Géant des Batailles and Lord Raglan (the latter a strong grower), did not move at all the first year; the former has not yet produced a bloom worthy of its reputation; and last February I put in a plant each of Colonel de Rougemont and Léon des Combats, and up to the present time they have scarcely grown at all, while Francis the First, a Rose of moderate growth, has reached nearly 4 feet in height. Perhaps their slow growth may be attributed to their having been worked indoors at a high temperature, and sent out before being properly hardened off; but whatever the cause may be, they are useless, especially when rapid growth is an object.

Some of the others of my Hybrid Perpetuals have grown most luxuriantly, especially Alexandrine Bachmeteff and Queen Victoria; but the latter does not open well, which I fear may turn out to be the case with that fine Rose Auguste Mîé, which I did not allow to bloom this season on account of the smallness of the plant; it is now large and healthy, having grown very rapidly. Madame Louise Carique, Jules Margottin, Victor Verdier, and Reine des Violettes have grown finely; and Duchess of Norfolk, Souvenir de la Reine d'Angleterre, Anna de Diesbach, La Reine, Senateur Vaise, Buffon, and Dr. Bretonneau, judging from the progress made by the plants, which were very small at the time of planting, I think will also do well, but the last is too dwarf in habit.

The Bourbon Rose Parton is a very strong grower; but Acidalie, though I think it will ultimately succeed, has not yet shown any sign of being a vigorous grower, as most nurserymen describe it.

I have also a few summer Roses that have done remarkably well—viz., Paul Ricaut, Coupe d'Hébé, Brénus, Chénéol, and the Mosses Laneii, Comtesse de Murinais, Baronne de Wassenaer, Princess Adelaide, a very strong grower, and Celina; the latter has grown pretty freely here, although generally described as dwarf. However much some people may fancy this Rose, I feel rather disappointed with it; its buds are pretty enough, but the flowers are only semi-double.

The Austrian Rose Harrisonii grows and flowers freely here, and is very beautiful, but the Persian Yellow will not open with me at all; I have it, however, budded on the Briar, and hope to see a flower or two next season for the trouble I have taken with it.

In addition to the above I budded, last year and this, some forty or more stocks of the Dog Rose, &c., from which I expect a fine display of bloom next season. Amongst the first-budded were two Roses I had given me by a neighbour the year before, which, on opening their flowers, I did not consider good enough to grow beside the other varieties.

I was about to take them up, and throw them away, when an idea struck me that I might turn them to account by converting them into standards of some other sort: I consequently budded one, a plant with a clean stem of about 15 inches in height, with Duchesse de Cambacères, and the other, about 3½ feet high, with Général Jacqueminot; the former from a dormant bud has this season grown into a fine bushy head, which produced no fewer than thirty-eight buds; and the latter, from a bud which was not much larger than a pin-head before starting into growth in the spring, has thrown up four strong shoots which have scarcely ceased blooming from July to the present time.

My reason for mentioning this is that from what I have seen I believe it will make an excellent stock, which the Dog Rose is not under all circumstances; for in light and dry soils, unless mulched or otherwise carefully attended to, it will not thrive at all. On the contrary, the Rose I speak of appears to do well in almost any situation; it grows and flowers freely in most of the cottage gardens in this neighbourhood, where it receives not the slightest attention. In colour it is of a rosy pink when nearly opened, but soon changes to a pale blush or white; flowers large and irregular in shape; in its wood and foliage it has some resemblance to the Moss Comtesse de Murinais. It does not, at least so far as my observation goes, throw up suckers at long distances from the root like the Dog Rose, which is a great advantage; for standards are frequently half ruined by these secret enemies before one is aware of their existence. I intend, however, giving it a further trial, having put in a dozen or two for budding on next season, after which I will be better able to judge of it.

Although the Rose, as you may have observed, is my especial favourite, I do not altogether forget the cultivation of other plants; but as your patience must now be nearly exhausted, I will merely state in conclusion that with various flowers, from the humble Crocus to the more stately Tulip and Gladiolus, with masses of Saponaria, Nasturtiums, Stocks, and Asters, I have contrived throughout the season not only to make one of the humblest cottages in the Highlands look cheerful, but, to a certain extent, comfortable by having the kitchen garden well stocked with various kinds of vegetables, including Scarlet Runners even, which are not known here as an article of food, a few nice rows of Celery, and some other things quite foreign to this locality. Being a young amateur, I feel some hesitation in forwarding these remarks; but the articles on the Rose which appear from time to time in THE JOURNAL OF HORTICULTURE, to which I am a regular subscriber, being chiefly confined to England, I do so in order to show that the queen of flowers, with a little care, can be grown, and grown well, even in our Highland glens. I regret, however, to state that, although such may be the case, cottage gardening in the Highlands is much neglected; a few Cabbages, Greens, and Potatoes are certainly from necessity grown, but in the cultivation of flowers the Highland cottager, generally speaking, takes no delight whatever.—LOCH NESS, Fort Augustus, Inverness.

ENTOMOLOGICAL SOCIETY'S MEETING.

THE November meeting of the Entomological Society, held on the 7th inst., was very fully attended, in consequence of that evening being fixed for the presentation of a very handsome piece of plate (in the shape of an épergne representing a Palm tree with outspreading branches, the base clothed with foliage, amongst which insects were sporting), to William Wilson Saunders, Esq., F.R.S., Treasurer of the Royal Horticultural Society, &c., one of the most liberal patrons of entomological science. This piece of plate had been subscribed for by the members of the Society; and the address by which it was accompanied, engrossed on vellum, set forth Mr. Saunders's claims upon entomologists for his uniform liberality and devotion to the Society. Amongst the insects represented at the foot of the tree were several which had been dedicated by their describers to Mr. Saunders, such as the *Erycina Saundersii*, *Mecynorhina Saundersii*, &c. Mr. Saunders, after expressing his gratitude to the members for so handsome a gift, impressed upon them the necessity of careful investigation into the habits and economy of the

objects of their study, and which had been too much neglected by entomologists. He had been anxious to forward exotic entomology by assisting in sending out collectors to foreign countries; but the collections which he had thus formed were freely open to any one desirous of studying them; and he should much prefer that the many new species which had thus been obtained should be described by our own writers rather than left for foreigners to publish.

Mr. Sidebottom exhibited four species of Beetles belonging to the family Curculionidae new to the British lists—namely, *Lixus filiformis*, *Sibynce canus*, *Pentelus griseus*, and *Centorhynchus Poweri*.

Mr. F. Smith exhibited specimens of both sexes of a new British Bee, *Bombus pomorum*, taken near Deal, and which had been mistaken for a supposed variety of *Apathes rapae*, but which proved to be a true species of Humble Bee.

Mr. Saunders exhibited some Galls found on rootlets of the Oak several feet underground, from which about a week previously wingless specimens of a species of *Cynips* made their appearance, all of which proved to be females. It was difficult to understand how these insects could either make their escape out of the ground from such a depth, or how they could find their way from the surface to the rootlets to deposit their eggs. It was also remarkable that the males were not developed at the same time, and it was suggested that this was a case of alternation of generations, such as had recently been pointed out as existing in the genus *Cynips* in the United States. Mr. Smith stated that, so far as his observations went, not a single male individual of the genus *Cynips* was known. The same was also the case with a species of *Tenthredo* (*Hemichroa Alni*), of which hundreds of females had been taken, but no male had ever been seen either in this country or on the continent.

Mr. Stainton exhibited a remarkable kind of Gall found on Oak trees, resembling a lump of cotton wool, of which, however, the perfect insect was not known.

Mr. Saunders also exhibited several other kinds of Galls, which he had found in Switzerland.

A series of engravings of British species of Hemiptera intended for a work on that order to be published by the Ray Society, was exhibited.

A letter was read from S. Stone, Esq., of Bournemouth, giving an account of the carrying out of diseased larvae of Wasps by the perfect insects. He had observed this in nests of both *Vespa vulgaris* and *sylvestris*. He had also found the larvae of the parasitic *Ripiphorus* in the nests of these insects, and had observed that the larvae enclosed in the larger cells of the queen Wasps were larger than those in the small worker cells.

Professor Westwood suggested that the larvae of the Wasps appeared to have been attacked by an epidemic similar to that in the hive Bee, described in these pages under the name of foul brood by Mr. Woodbury; and Mr. F. Smith gave an account of his visit to that gentleman, who had unfortunately rediscovered the malady in one of his hives.

Mr. Carter, of Manchester, exhibited several beautiful specimens of the very rare *Trochilium sphegiforme*, reared from the stalks of Alder in North Staffordshire.

The Secretary gave a very favourable account of the recent exhibition of natural history at Huddersfield, in which insects were well represented, amongst which was a remarkable hermaphrodite specimen of *Liparis dispar*. The exhibition had proved a complete financial success.

Mr. Baly read a paper containing descriptions of new species of exotic Plant Beetles (*Phytophaga*).

Mr. Wilson, of Adelaide, South Australia, sent an article containing a general survey of the entomology of our South Australian colonies as hitherto known. About five thousand species of Coleoptera had been captured, including 200 Carabidae, 600 Curculionidae, 450 Chrysomelidae, 300 Buprestidae, &c.

The Secretary read a translation of a memoir recently published on the natural history of a species of *Coccus*, which attacks the Sugar Canes in the island of Mauritius. In the discussion which ensued on this paper Mr. Saunders stated the very beneficial results he had found in the employment of diluted spirits of wine (one-half of water), for the destruction of Mealy Bug and other species of *Coccids* in greenhouses. Thus diluted it does not injure the plants,

and when applied in small quantities at the tip of a leaf it runs down the veins, in which especially are nestled the young of the Scale insects or Mealy Bugs.

WORK FOR THE WEEK.

KITCHEN GARDEN.

Cabbages, hoe between the earliest-planted, and also between Lettuces, &c. This should be frequently done to growing crops throughout the winter, as by keeping the surface loose and open frost is prevented from penetrating to any great depth, and the roots are kept in a more active state. *Celery* may have a final earthing-up when the soil is dry, if the weather has prevented its being done before. *Cardoons* may also be treated in a similar way. *Leeks*, they should have more earth drawn to them before frost sets in. They are an excellent vegetable when well blanched. *Peas*, whenever the ground becomes dry put in a second crop of an early sort, as also Mazagan Beans. If *Peas* are sown in the open quarters the drills should be protected by a ridge of earth kept to the north or east of the rows. Keep down mice by trapping, they are troublesome to early-sown crops of the above. *Radishes* should be sown either singly or with the Short Horn Carrot on a dry warm border in beds. The Early Frame or Short-topped is best at this time. Cover the beds with straw or litter till the seeds germinate, when they should be uncovered every day when not frosty. *Sea-kale*, the old plan of forcing *Sea-kale* was a most expensive and unsatisfactory mode, expensive on account of the breakage of pots, and the loss of labour, and unsatisfactory on account of the want of more perfect control over the whole proceeding. The best as well as the most economical plan is to take up the roots and force them in a body, after the manner of Asparagus. To accomplish this, it is of course necessary to grow the roots strong, for the especial purpose, and in the kitchen garden. Such roots being available, they may be forced in any structure from which light and the severity of the weather are excluded. The roots can be either forced in frames with a double mat nailed down over the glass, or under the mere wooden box; but the best place is the Mushroom-house. A sunken pit is necessary, and this should be a yard in depth—that is, 2 feet for the fermenting material, and 1 foot or nearly so, for the crowns to rise, with any opaque covering considered necessary. The strongest fermenting material is placed at the bottom, with a slight covering of old leaves, the crowns are set thereon as thickly as they can stand, and filled up between with old tan. If at the beginning the heat is too strong it is reduced by the application of cold water, repeated if necessary, and when the crowns are 3 inches long all the remaining bottom heat is done away with by the application of cold water; this renders the *Kale* stronger, and retards it for succession. *Rhubarb* may be forced in a similar way. This, however, may be placed in large pots, and set on flues or other warm surfaces. Asparagus requires the same treatment, but it should have 4 inches of soil over the crowns, for if the stalks be long exposed to a low temperature, they will be hard and of inferior flavour.

FRUIT GARDEN.

Where orchard trees have been left for some years unpruned, the hand-saw will be required to thin out the larger branches. Keep the middle of the trees open to admit air, and to promote the formation of fruit-buds on the interior branches. It is, however, a bad practice to leave any description of fruit tree to itself, as it would in all cases pay the cultivator to prune once a-year at least. Push forward pruning, nailing, and tying espalier trees, and suchlike tedious operations, as fast as the weather and circumstances will admit.

FLOWER GARDEN.

Let lawns be well rolled when sufficiently dry for the purpose. Every part of the turf should be frequently swept during the winter. Nothing adds so much to the enjoyment of pleasure-ground scenery as well-kept turf, and when connected with evergreen shrubs an agreeable relief to the dreariness of the season is afforded, which renders the loss of more attractive plants less to be regretted. At the same time see that the walks are kept dry and firm, in order that they may at all times be comfortable to walk upon.

STOVE.

This will require a very liberal ventilation now, increasing fire heat, if necessary, in order to accomplish it. Still apply moisture to the air, although in a diminished degree; but withhold moisture entirely from the roots of deciduous Orchids, or those sinking into a state of repose. If there is any fear of a scarcity of bloom next May, a portion of the *Achimenes* and *Gloxinias* should be repotted at once, and placed in a warm part of the house, choosing such as have been longest at rest; and a few *Clerodendrons*, *Allamandas*, a plant or two of *Echites splendens*, and *Dipladenia crassinoda*, may also be started. Let *Ixoras* and all other hard-wooded plants that have made sufficient growth, be kept rather dry at the root, in order to check their growth, and induce a tendency to form bloom-buds, but do not let the soil in the pots become so dry as to affect the foliage.

GREENHOUSE AND CONSERVATORY.

Should dull weather continue, occasional fire heat will be required for the plants in these houses. The fires should be lighted in the morning, in order that the houses may be thrown open during the day to promote a free circulation of air. This will dry up damp and help to keep the plants in a healthy state. Let the surface soil of the pots be slightly stirred to remove moss and promote free evaporation from the surface.

PITS AND FRAMES.

With the assistance of a garden frame, and some stable manure or tan to furnish a gentle heat, *Hyacinths* may be had in flower at Christmas, and with a good stock of bulbs the display may be kept up till April or May. For early forcing the bulbs should be planted in September, as recommended at that time; those to flower in spring should be planted in October, November, and December. The best pots are the 48-size for one bulb, and the 32-sized pot for three bulbs. It may be well to add that three bulbs grown together in one pot produce a much finer effect than single bulbs. The soil should be one-half fresh loam, decomposed horse or cowdung, with a small portion of clean sand well intermixed. If, however, this cannot be obtained, then the lightest and richest at command must be employed instead. Fill the pots lightly with the prepared compost, and place the bulb upon the surface, slightly pressing it into the soil. After giving a liberal watering set the pots out of doors on a place where perfect drainage is secured, and cover them with about a foot of old tan. After remaining there about a month or five weeks the bulbs will be sufficiently rooted to render it safe to remove them to a gentle bottom heat of about 55°. It is necessary to be careful that the roots are not allowed to penetrate the fermenting material. A sitting-room window forms a suitable situation for *Hyacinths* while in bloom, and the beauty will there be longer in fading than in most places.—W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

TRIED to clean it up a bit, but the dripping weather prevented us doing more than clearing the walks of leaves; taking up Asparagus for an early bed, filling merely one light at first, as we have rather encroached on our stock in previous years, and must dispense with having it so early for a year or two, until the stock fit for forcing is larger.

Artichokes, Globe.—Cut over the stems, and placed some long litter over each stool, and then a few spadeful of soil over it to keep it in its place. It is safest to give these this little protection, especially in heavy soils. The assurance of their hardiness will be a poor compensation for the want of a supply if, from trusting to that assurance, the plants should be killed by a severe frost. We have known them stand uninjured and unprotected for several years, and then, after another season, not a bit of the old plants was left alive.

Sea-kale.—Took up a lot, squeezed the roots into pots, and placed them in the Mushroom-house. It would be easier to place them in a bed at once; but placing the plants in pots permits of their being moved as desirable, either into a little bottom heat, into a cool dark place when

the heads might incline to come faster than we want them. Other vegetables much the same as in the two previous weeks.

FRUIT GARDEN.

Took most of the Strawberry plants in pots under cover in the orchard-house. Placed some in frames with a little bottom heat, just to give the plants a start, and yet, by giving plenty of air, prevent anything like drawing the crowns. These pots are merely set on the bed in reduced leaves, a foot thick of fresh leaves being beneath them; but we would have preferred the pots to have been either suspended or set on a hard bottom, as shelves, &c., at first, as whatever will tend now to produce vigorous foliage will also tend to rob the flower-buds of their strength. Having no nice airy house at liberty, we do not now desire Strawberries very early. We have had them very tidy to look at at Christmas and on New Year's-day; but unless the weather was frosty and a bright sun, there was little flavour in the fruit. In bright weather, and from keeping the pots rather dry for some days before gathering, the fruit was very tolerable.

Pruned some more Peaches, and looked over Grapes in vinerias, and fruit of Apples, Pears, &c., in the fruit-room, as this dull muggy weather is the worst for fruit-keeping. We think if the shelves and drawers are clean nothing should be used to set the fruit on except well-dried paper. Straw, hay, &c., always give more or less of a taint whenever they become a little damp. In this dull weather a pretty free ventilation should also be given, or the place will become too damp and confined, and the fruit in consequence will sweat and rot. A few rotting fruit will contaminate the whole house, and all such should therefore be removed. Fruit spotted with the first marks of decay should either be used at once or given to the garden men, as in a short time they will be fit for nothing.

Except in some of our large places, as Trentham, Enville, Luton Hoo, Wrest Park, &c., it is rare to find a suitable fruit-room. Any shed or out-of-the-way place is made to answer. Much may be done in the most unsuitable places if there is a proper amount of earnest enthusiasm; but even enthusiasm will die out if there is nothing with which to feed its fire. We knew of a case in which a bachelor gardener saved the crops of some Peach trees for two years in a severe frosty night by each time getting out of bed, and taking the whole of his bedclothes to act as coverings to the trees. No other means being in future procurable, and as the proprietors objected to even the appearance of branches, our old confrère at last cooled in his enthusiasm, and the next year the frost settled the young crop. That was not the worst of it. We have no doubt that the use of the bedclothes for the above purpose, however commendable as an effort of anxious enthusiasm, laid the foundation of our old comrade's last illness. That is not the only instance in which gardeners to our knowledge have injured their health for life from an excess of otherwise most commendable zeal and anxiety. To secure good winter fruit for table, and to see it comfortably before it goes there, a good place, hollow-walled, hollow-roofed, and yet air and ventilation at command, ought to be secured.

Fig-house.—The fruit now becoming very insipid, we had all removed that was larger than a pea, pulled off any leaves that were left, gave the plants a fair thinning, as we grow them roughly in the bush style, washed them over with soap and water, and then painted with clay, sulphur, and a little Gishurst mixed. We have not washed these Figs for several years, as we never noticed anything on them; but this season we saw some scale, and we would rather have it all destroyed before the plants come into leaf than afterwards. Prevention is ever better than cure; and most likely if we had washed the trees last season we would not have had this incipient appearance of insects now. We immediately watered the plants to prevent the roots becoming overdry in winter, and then filled the whole bed with bedding plants, and gave plenty of air to keep the house cool, which will be continued until we give more heat to start the Figs. After many trials and some experience we have given up allowing a Fig to stand over the winter that is much larger than a pea. Those just swelling at the base of where the leaf was are still more sure. Did we want to bring in our ripe Figs early in spring we would have effected this thorough clearing by October,

as we have long proved that the longer Figs are allowed to bear in autumn and the beginning of winter the more apt are they to drop their fruit next season.

Singleton, or White Ischia Fig.—This dropping of the first crop is very characteristic of the Baccifco, the Singleton, and the White Ischia, all of which we believe to be *allies* of each other. There is not a better nor sweeter Fig than this little honeycomb of a thing, which in general is not much larger than half the size of a good White Marseilles; but to have it good and well ripened, and opening itself up like the half-expanded flower of a *Stapelia*, requires a good heat. We mention this the more particularly because, though we have had a fine warm summer, we did not ripen this Fig well in an orchard-house, and kept them too long there to ripen kindly in a closer and warmer place afterwards. It is true we were rather deficient of water during the summer, but we do not think that was the cause of not ripening kindly so much as the craving for a closer and warmer atmosphere. Such kinds as Lee's Perpetual or Brown Turkey, and even White Marseilles, ripened kindly enough, the latter two crops and a portion of a third; whilst this little thing did not ripen one crop comfortably. We cut off great batches of fruit from small pots, because there seemed no chance to their ripening kindly. In a vinery or in the Fig-house, where a little artificial heat was used, they ripened kindly, and bore profusely. We mention this the more particularly because we have a little doubt if the questionable liquid we were forced to use suited this rather delicate Fig over-well, though not hurting other Figs; and, therefore, we should be glad to know if others this season have fruited this kind to their minds in an open, cool, unheated orchard-house. To make the Singleton yield a good first crop in April May, &c., it should be pruned, and all the fruit on it removed before the end of September. Without such precautions it is so apt to throw off its first crop, that it would be best to prune it, and treat it to yield only one crop in the year. This one crop in the orchard-house ripened very unsatisfactorily with us this season.

ORNAMENTAL DEPARTMENT.

As the weather permitted, got on with cleaning beds, &c., regulating herbaceous plants, faggoting old Scarlet Geraniums in pots, and shallow boxes, examining all young stuff, to prevent damping, taking off each leaf that showed any signs of such visitation, giving the plants more room, stirring the surface soil, and carefully watering any plant that seemed dry, so as not to damp the place. Thinned creepers in conservatory, gave manure water to Chrysanthemums, Primulas, Cinerarias, Pinks, and Perpetual Carnations, and to other things that needed it. As some damp has been caused by previous washing and cleaning, put on a brisk fire in the daytime, with plenty of air to dry the house, giving air to hardwooded plants, however, as detailed the other week. Placed Roses in pots in a little bottom heat. It is amazing how these plants flourish in a cool temperature with a slight increase of bottom heat, and the pots plunged in a bed, even if the bed is old sawdust. All hardy shrubs force nicely into bloom when thus helped. See what was lately said about looking after bulbs of all kinds. Thinned out very much the creepers in the stove to give light, and removed all the autumn Gesneras, &c., to the floor of a cool house, where frost will not reach them. Removed also the pots of Caladiums to the floor of a cool stove, and covered them over with moss, which will prevent them becoming over-dry, and otherwise we will let them get pretty dry, but not quite so. All the Amaryllids, Tritomas, &c., that are now resting, will receive moisture enough if the pots stand on a cool moist floor in a house where the temperature is rarely under 40°. In such dull, foggy weather, damp, and weak, sickly growth must be neutralised by plenty of air, and a low temperature, and if possible a drier atmosphere than that which prevails outside our houses.—E. F.

TRADE CATALOGUE RECEIVED.

B. S. Williams, Paradise and Victoria Nurseries, Holloway.
—Catalogue of New and Choice Pelargoniums, New and Rare Exotic and other Plants.

COVENT GARDEN MARKET.—NOVEMBER 26.

The supply of out-door fruit continues plentiful, and consists of the same varieties as mentioned in previous reports. Winter Nalis Pears have made their appearance this week. Of Grapes there are sufficient for the demand; of Pines there is a better supply, and prices have somewhat declined. Oranges and Lemons are now coming in more freely. All out-door vegetables, such as Cabbages, Brussels Sprouts, and Savoys, are sufficient for the demand. Potatoes are abundant, but rather dear; and Onions have also increased in price, though some consignments have come in from Germany.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples.....	1	0	2	0	Melons.....	1	6	4	0
Apricots.....	0	0	0	0	Mulberries....	punnet	0	0	0
Cherries.....	0	0	0	0	Nectarines.....	doz.	0	0	0
Chestnuts.....	14	0	20	0	Oranges.....	100	5	0	10
Currants, Red...& sieve	0	0	0	0	Peaches.....	doz.	0	0	0
Black.....	0	0	0	0	Pears (kitchen)...& bush	1	0	10	0
Figs.....	0	0	0	0	dessert.....	doz.	1	0	3
Filberts & Nuts 100 lbs.	80	0	80	0	Pine Apples.....	lb.	5	0	8
Cobs.....	70	0	80	0	Piama.....	& sieve	2	0	7
Gooseberries...& sieve	0	0	0	0	Pomegranates.....	doz.	4	0	6
Grapes, Hamburgs lb.	1	6	5	0	Quinces.....	& sieve	1	6	3
Muscats.....	3	0	7	0	Raspberries.....	lb.	0	0	0
Lemons.....	100	5	0	10	Walnuts.....	bush	14	0	20

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes.....	0	0	0	0	Horseradish... bundle	2	6	to	5
Asparagus.....	0	0	0	0	Leeks.....	bunch	0	2	0
Beans Broad.....& sieve	0	0	0	0	Lettuce.....	score	2	0	4
Kidney.....	100	2	0	0	Mushrooms.....	pottle	1	6	2
Beet, Red.....	1	0	3	0	Musht. & Cross, punnet	0	2	0	0
Broccoli.....	1	0	3	0	Onions.....	bushel	0	4	5
Brussels Sprouts & sieve	2	6	3	6	pickling.....	quart	0	6	0
Cabbage.....	1	6	3	0	Parsley.....	bunches	4	0	6
Capelcums.....	100	0	0	0	Paranips.....	doz.	0	9	1
Carrots.....	0	5	0	0	Peas.....	quart	0	0	0
Cauliflower.....	4	0	6	0	Potatoes.....	bushel	2	6	4
Celery.....	1	0	2	0	Radishes doz. bunches	0	9	1	0
Cucumbers.....	0	9	1	6	Savoys.....	doz.	1	0	2
pickling.....	0	0	0	0	Sea-kale.....	basket	3	6	0
Endive.....	2	6	3	0	Spinach.....	sieve	3	0	5
Fennel.....	0	3	0	0	Tomatoes.....& sieve	0	0	0	0
Garlic and Shallots, lb.	0	8	0	0	Turnips.....	bunch	0	3	0
Herbs.....	0	3	0	0	Vegetable Marrows doz.	0	0	0	0

TO CORRESPONDENTS.

. We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to The Editors of the Journal of Horticulture, &c., 171, Fleet Street, London, E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

TRITONIA AUREA CULTURE.—I advise all those interested in this plant to try both systems—viz., that of Mr. Abbey and that I advocate, and to judge for themselves. I never found Tritonia aurea in a state devoid of growth, or leaves more or less green.—W. EARLEY, Digsneil.

GRASS-LAND MANAGEMENT (Miles).—The best work on the Grasses, and giving some instructions for the improvement of meadows and pastures, is Sinclair's "Hortus Gramineus Woburnensis." There is also a good essay on the economical improvement of Grass lands in the seventh volume of the "Quarterly Journal of Agriculture."

SELECT CHRYSANTHEMUMS (P. J. H. D.).—Of Tasseled flowers, Triomphe du Nord, reddish chestnut; and Invincible, white. These are the only two which we can recommend to you. For twelve good incurved kinds have Jardin des Plantes, Cherub, yellow; White Queen of England, Beverley, white; Lady Hardinge, Lady Sinde, Her Majesty, Bella Donna, rose and blue; Sir Stafford Carey and Lord Ranelagh, brown; Prince Albert and Dr. Ross, crimson. Six Pompons—Fairfax of the Fair, Madame Fould, Danse, Salomon, Capella, Madame Eugene Domage.

WINTERING COLEUS VERSCHEFFELTII (J. T. O.).—The large bay window is preferable to either cold frames or the window with a north aspect. Keep the soil dry, giving no more water than is sufficient to prevent the stalks shrivelling. It will not bear much cold, and not the least damp, and requires a temperature of 45° to winter it safely. You may winter it, however, by keeping it dry, and excluding frost by heating the room either with a lamp or hot water, the latter being preferable. It should not be cut down now, and not in spring until it commences growing afresh. "Florist's Flowers," which may be had free by post from our office for five stamps, contains the information sought.

ANALAS ANONA POTTED IN LOAM (J. M.).—We have grown Analas very fairly in loam and leaf mould, and we think your plant will also do well until the blooming is past, when we would pot it in peat soil. It is only natural for the leaves to turn yellow and fall, though more have fallen than we should like at this season. Ours are remarkably fine in foliage this year.

BRITISH FERNS FOR EXHIBITION (A. Young Gardner).—Lastrea Filix-mas cristata, Polystichum angulare proliferum, Athyrium Filix-foemina plumosum, Scolopendrium vulgare multifidum majus, Asplenium trichomanes inoleum, Blechnum spicant ramosum. Take the Strawberries under cover at once, and by the beginning of January place them on shelves near the glass in a vinery at work, bringing them on slowly.

THRIPS ON FERNS.—CLIMBERS FOR A CONSERVATORY.—WHITE HELIOTROPE (Flora).—On a calm evening fill the house with tobacco smoke by burning shag tobacco in a fumigator, and repeat the dose on the next night but one. Fumigate afterwards whenever a thrips is seen. Our correspondent wishes to know how to preserve Arbutus berries, so as to use them as an ornament for dishes. As to creepers for a conservatory, no mention is made as to how many are desired. Lapageria rosea, Mandevilla suaveolens, Mimosa prostrata, Passiflora Neumannii and Chocomaia, Hibbertia grossularis/olia, Jasminum heterophyllum, Soliva linearis, Tacsonia mollissima, Kennedya monophylla, and K. rubicunda superba, are all suitable. We know of no shrubs that will thrive in extremely wet soil without draining except Willows, Alder, and bog plants, and not one in a hundred are shrubs. So far as we know, a white Heliotrope is not now to be had. H. linifolium, from the Cape, we have grown, but thought little of it. Most of the white kinds are annuals and biennials.

VINES FOR GREENHOUSE.—FERNS FOR GLASS CASE (M. P.).—You will require five Vines if they are planted along the front, the first one being 1 foot 6 inches from the end, and the others 3 feet apart. You may have Black Hamburg, Buckland Sweetwater, Black Champion, White Frontignan, and Trentham Black; but we would only have three in so narrow a house, and plant in front a Black Hamburg 3 feet from the end of the house, Buckland Sweetwater in the centre, and Trentham Black 3 feet from the other end. When they reached the rafters we would let two shoots grow, and train one to the right and the other to the left, and up the house when each had run 1 foot 6 inches. In this case you would have rods at 1 foot 6 inches from the ends, and a little less than 3 feet apart, just the same as if five Vines were planted. You may have either British or exotic Ferns, just as the situation is cold or warm. Say British—Lastrea Filix-mas crisp; Polypodium vulgare, P. vulgare aritum; Scolopendrium vulgare, and the varieties sub-cornutum, ramosum, marginatum, and multifidum; Blechnum spicant ramosum, and B. spicant laetifolium; Asplenium marinum, A. septentrionale, A. viride, and the multifid form (bifidum or multifidum). A. trichomanes, and varieties multifidum, incisum, and depauperatum; Adiantum esculum-Veneris; Asplenium fontanum; Polypodium cambricum; Polystichum lenehitis, and P. angulare proliferum. Exotic Ferns—Asplenium monanthemum, obtusum, reclinatum, radicans, dimidiatum, flabelliforme, and attenuatum; Adiantum reniforme, setulosum, affine, and cuneatum; Davallia canariensis, pentaphylla, decora, and solida; Lastrea glabella, acuminata, and quinqueangularis; Acrophorus Novae-Zelandiae; Nipholobolus rupestris, peruvianus, and lingua; Neurolepis tuberosa, and pectinata; Drynaria Fortunii; Platyloia rotundifolia; Pteris pectinata, and stigmatalia; Pteris cretica, serrulata, alba-lineata; Woodwardia (Doodia) aspera, media, and corymbifera or caudata; Selaginella densa, and S. denticulata, for surfacing.

RIDGING LIGHT SOIL (K. R.).—Your gardener is probably correct. Ridging light soil, and exposing it thus to the frosts of winter, has little or no enriching effect, but it confers a benefit by destroying the larvae of vermin if the frost is intense. Your best culture would be to grow your Turnips, &c., in narrow beds, deepening the soil of these by throwing on to them the earth from the paths, and mulching your crops with coco-nut fibre refuse and other material.

CASE FOR STRIKING CUTTINGS (A. P. D., Salop).—The Bijou Plant Case made by Mr. Stock, Archer Street, Westbourne Grove, answers. It is heated either with gas or Child's night lights.

MUSHROOM-GROWING (A. Reader).—See an article on this subject by Mr. Fish in No. 169. It is just the old concluded story repeated. Place spawn in the ground anywhere, and prevent it being lost there by heat and moisture, and it will produce Mushrooms without any chemical waterings; but such spawn will soon exhaust itself. To secure a good lasting bed the spawn must run in rich manurial matter. The article referred to, and "Doings of the Last Week," will tell you more than we can well repeat now. We have no faith in such short cuts to success. We have had plenty of Mushrooms in the open air by merely placing bits of spawn below the ground an inch or so, but they were soon exhausted. All the chemical waterings, &c., are mere theoretical delusions.

VINES IN POTS (E. S.).—Any kind of Vines may be grown in pots in a vinery. For an orchard-house, Black Hamburg, Royal Muscadine, Dutch Sweetwater, and Buckland Sweetwater, are perhaps the best. See remarks of Mr. W. Paul the other week. Plants in pots and in the open ground are in different circumstances. With Vines you may keep the soil in the pots open until they are placed in the fruiting-pots. After that, and when starting for fruit, the soil should be firm. When mere growth is the object keep the soil open; when fruitfulness is the object keep it firm.

SHRUBS FOR A GALLERY (M. D.).—You say nothing at all about the sunlight, the most important circumstance. Gaslight is prejudicial to plants, unless nicely managed as to ventilation. No plants will flourish long without the light of day. If, as we presume, you are without that light, the only thing you can do is either to grow large plants of Geraniums, keep them in the gallery for a few days, and then replace with others, taking them in and out. Shrubs, such as Anonbas, Laurels, and Cypruses, may be trained in the same way. If you have light any shrub will succeed.

SULPHUR PAINT FOR FRUIT TREES (C. P.).—Sulphur and clay is a capital paint, and you may add a little lime, but not much if the lime is fresh. If the lime is mild it will have little more effect than any other earth, and we would prefer a little soot instead. The main object is to shut up all the buds and wood from the air for a time. We would decidedly paint the trees, though they showed no signs of insects during the summer, doing it chiefly all about the buds with a soft brush. Prevention is better than cure. We have not painted our Figs for several years, and saw nothing until this autumn, when we noticed scale. We washed with soap water, and then painted with clay, sulphur, and a little soap in the water. As the buds swell the mixture will drop off, and you can help it gradually by slight syringing.

VINES—PEARS ON QUINCE STOCKS (W. E.).—The "Vine Manual," which you can have free by post from our office for thirty-two postage stamps. The point of union of the scion and the Quince stock should be buried beneath the surface of the soil.

CAMELLIA BLOOMS FALLING WHEN HALF-EXPANDED (J. M.).—We think that the temperature was too low, and that if there had been an increase of heat sooner they would not have fallen. They remained a fortnight half-expanded, and then you gave an increase of heat sufficient to have thrown off the buds of anything. A rise of 10° in so short a space of time must be injurious to vegetation. We are not certain, but incline to the opinion that the buds were not fully matured, and the imperfection did not manifest itself until the blooms commenced expanding.

REPLANTING FERNS IN ROCKWORK UNDER GLASS (A. B.).—The best time to replant them would be in the March of next year, but you may do so now if care be taken to remove them with as much root as possible.

SOWING INDIAN SEEDS—COVERING VINE-BORDER (W. M. B.).—Sow the seeds in March, and place the pots in a hotbed of from 75° to 85°. The Vine-border would be improved by covering with a good thickness of dry leaves or litter, but not such as would heat much. This covering would prevent the border becoming very wet, as the materials would themselves absorb most of the rain. If not covered in this way, it ought to have at least a six-inch covering of litter to prevent frost injuring the roots. Your covering-up well the border with leaves and dung a short time before commencing to force is good.

GLASS FOR VINEY (Calearia).—It is against our rules to address our coadjutors privately. Mr. Abbey is not a plant-seller. We question if you could get the plants spoken of in any one nursery at present; but if you make your wants known you will obtain them all by degrees, and as soon as the demand is known there will be no want of a supply. The 16-ounce glass will do if about that weight; but if some of it does not range above 13 ounces it will be scarcely strong enough, as your rafters are 20 inches apart. We believe that in a box of some hundreds of feet you will find little that is fully 16-ounce, though called so. Some may be a little more, but the bulk will scarcely average 15 ozs. The squares should not be deeper than 12 inches at most—that is, 20 by 12. Twenty by ten would be better, as the laps give strength. If the place is exposed, however, we would advise what is called 21-ounce, though it would cost some 1s. 3d. more. We have used 16-ounce ourselves, and, as yet, with little or no casualty for a number of years; but we think that were we doing much again we would prefer 21-ounce, as the squares bend a little in storms, and especially with snow. With hail we think the bending is no disadvantage.

GARDEN PLAN (A Subscriber, Ramsgate).—The only improvement in your plan that we would suggest would be to do away with the stiff shield-like piece of grass in front of the house by curving it on each side, either by taking it nearer the wall, or farther from the wall about its centre, and the same beyond A, either of which would do away with the stiffness and make it more picturesque. The quickest-growing evergreens would be the common Laurels; but if you are far enough from the smoke we would advise them next the wall, and to be cut out as they grew too large, and then a mixture of *Cypresses*, *Abor Vitæ*, *Arbutus*, *Portugal Laurels*, and *Antebus*, and *Laurustinus* for the front row. If on the turn of the walk you came near the wall, you could drape it with Ivy. If the soil is poor enrich it with rotten dung; if little better than sand or clay you will have to add some loam or good soil from a field or the sides of the highway. A few deciduous shrubs, as *Lilacs*, *Ribes*, and *Spirææ*, would enliven the borders.

CARROT CROP FAILING (George Wighton).—To guard against the ravages of the Carrot grub, we trench the ground 2 feet deep in November, working in a liberal dressing of well-rotted manure, and throwing the surface in ridges and as rough as possible. We throw it back or down on sharp frosty mornings in February, and in March a dressing of lime is applied. At the time of sowing the ground is strewn black with soot, not pointing it in like the lime with a fork, but covering it with the soil from the alleys between the beds. The seeds are then sown in drills in the usual way, and we invariably have a splendid lot of Carrots in autumn.

CHICORY DRYING (D. Applegate).—Mr. G. Abbey writes, "I gave that part of Chicory treatment which related to its cultivation and preparation for market, and it is not usual for cultivators to enter on manufactures." Of the drying process, he says he is "practically ignorant."

ROSE SEED SOWING (Rosen).—Gather the seeds when fully ripe, as they will be by this time, and place in a flower-pot in dry sand, guarding against mice which are very partial to them. In the first week in March break the seeds into pieces and sow them in pans, but these should not be common seed-pans, which are about 3 inches deep. Those for Rose-seeds should not be less than 6 inches, and they need not be more than 9 inches in depth. Good sized flower-pots will do quite as well. Drain well, and fill to within 1 inch of the rim with rich sandy loam, on this place the seeds about 1 inch apart, and cover with half an inch of fine soil. Plunge the pot outside quite up to the rim in a sunny open place, watering so as to keep the soil moist; but this will only be needed in dry weather. The young plants will probably appear in April or May, but the seed may not vegetate until the second spring. Strict guard must be kept against mice, or they will take them all. When the young plants have made three or four leaves take the plants up carefully and pot them in small pots, placing in a cold frame for a few days then harden off, and plant out a month later in a bed of rich soil. By the end of August they will have made shoots strong enough for budding, especially the strong growers, take these and bud on strong stocks. The following summer the buds will make vigorous growths, and they being left unpruned will bloom in the following year. If not budded let them grow without pruning, but most of the better varieties are shy bloomers on their own roots. They will bloom, many of them without working at three years old, but it usually takes six years to bloom a superior sort on its own roots, for they are mostly vigorous, at least, we want such for our climate. We fear that the horse-droppings would emit an unpleasant smell, but we recently saw the bottom of a closet turned into a Mushroom-bed, and it was producing famously.

—G. A.
NAMES OF FRUIT (D. J.).—1, Duchesse d'Angoulême; 2 and 3, Beurré Bos; 4 and 5, Vicar of Winkfield; 6, Aohan; 7, Comte de Lamy; 8, Beurré Blanc de Capucins; 12, Beurré Diel; 13, Uvèr-le's St. Germain; 14, Beurré Langellier; 15, Baronne de Mello. (C. B.).—The Apples are—1, Cathead; 2, Ribston Pippin; 3, Herefordshire Pearmain; 4, Claygate Pearmain; 5, Pearson's Pisto; 7, Lewis's Incomparable; 9, Golden Pippin. The Fern is *Asplenium adnigrum nigrum*, var. *acutum*. (H. T.).—The Pear is *Bessé*. The pale Apple is White Winte Calville, and the red one we do not know.

NAMES OF PLANTS (Louisa).—The Arabic sent is the *Lucida variegata*. We think the white variety. Of variegated Arabis there is also a yellow-tinted variety, but the colour was too faded to know whether the leaves had been edged with white or yellow. The succulent having no flowers we are

unable to point out. It looks like a low-running *Sedum* with small green foliage edged with white; but it might also be a *Mesembryanthemum*. We regret we cannot be sure. (A. T.).—Neither of the shrubs are nameable without flowers. The Ferns are—1, *Adiantum Ethiopianum*; 2, *Nephrolepis tuberosa* (*Worcestershire Subscriber*);—1, Unnameable in its present state; 2, *Adiantum* sp.; 3, *Anemidictyon phyllitidis*; 4, *Platyloma rotundifolia* (*Ruby*).—The Polypody is the variety called *cambricum*; the other Fern is *Lactrea spinulosa*. You must send a better specimen of the *Fuchsia*. (*Conifers*).—How can you expect us to name such scraps! We can only guess at what one or two may possibly be. 1, Is the tip of the frond of a *Blechnum*; 2, A *Thuja*, perhaps *occidentalis*; 4, May be *Biota orientalis*; 5, Looks something like a bit of *Taxodium distichum*; 7, Quite unrecognisable.

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

BIRMINGHAM POULTRY SHOW.

THIS Exhibition commenced yesterday, and will be continued until the 1st of December is passed. We have only time to print a list of the prizetakers. Our remarks, as well as the list of commendations, must be reserved until next week.

DORKINGS (Coloured).—First and Third, Right Hon. Viscountess Holmesdale, Linton Park, Kent. Second, Sir J. Don Wanshope, Bart., Miller's Hill, Dalkeith, N.B. Fourth, T. Tatham, Kingthorpe, Northampton. Fifth, T. Statter, Stand Hill, Manchester. **Chickens.**—First and Second, Capt. W. Hornby, Knowley Cottage, Preecot. Third, Sir St. G. Gore, Bart., Hopton Hall, Derbyshire. Fourth, R. P. Williams, Glaslan, Clostraf, Dublin.

Fifth, J. Frost, Parham, near Wickham Market, Suffolk.
DORKING HENS.—First, W. W. Bartlam, Henley-in-Arden. Second, Right Hon. Viscountess Holmesdale, Linton Park, Kent. Third, J. Drewry, Newton Mount, Barton-upon-Trent.

DORKING PULLETS.—First, Capt. Hornby, Preecot. Second, R. W. Boyle, Dublin. Third, Rev. E. Cadogan, Walton Parsonage, Warwick.

DORKINGS (White).—First, J. Robinson, Vale House, near Garstang. Second, H. Lingwood, Suffolk. **Chickens.**—First and Second, H. Lingwood.

SPANISH.—First, H. Lane, Bristol. Second, J. Garlick, Liverpool. Third, Rt. Hon. the Viscountess Holmesdale, Linton Park, Kent. Fourth, R. Teebay, Fairwood, near Preston. **Chickens.**—First, E. Jones, Clifton, Bristol.

Second, D. Parsley, Bristol. Third, E. Brown, Sheffield. Fourth, R. Teebay.

SPANISH HENS.—First, Miss Biggar, Ecclefechan, Dumfriesshire. Second, Rt. Hon. Viscountess Holmesdale.

SPANISH PULLETS.—First, Rt. Hon. Viscountess Holmesdale. Second, H. Lane, Bristol.

COCHIN-CHINA (Cinnamon and Buff).—First, Capt. Heaton, Manchester. Second, C. T. Bishop, Lenton, near Nottingham. Third, H. Bates, Yardley, near Birmingham. Fourth, R. Adams, Handsworth, Birmingham. **Chickens.**

—First, Capt. Heaton, Manchester. Second, T. Stretch, Ormskirk. Third, Rev. C. Spencer, Attleborough, Norfolk. Fourth, C. T. Bishop.

COCHIN-CHINA HENS (Cinnamon and Buff).—First, E. Smith, Middleton, near Manchester. Second, Capt. H. Heaton, Lower Broughton, Manchester.

COCHIN-CHINA PULLETS (Cinnamon and Buff).—First, H. Yardley, Market Hall, Birmingham. Second, T. Boucher, Birmingham.

COCHIN-CHINA (Brown and Partridge-feathered).—First, J. Shorthose, Shieldfield Green, Newcastle-on-Tyne. Second, J. Stephens, Walsall. Third,

Cartwright, Oswestry. **Chickens.**—First and Third, T. Stretch, Ormskirk. Second, R. White, Broomhall Park, Sheffield.

COCHIN-CHINA HENS (Brown and Partridge-feathered).—First, E. Smith, Middleton, near Manchester. Second, T. Stretch, Ormskirk.

COCHIN-CHINA PULLETS (Brown and Partridge-feathered).—First, Cartwright, Oswestry. Second, E. Tudman, Ash Grove, Whitehrob, Salop.

COCHIN-CHINA (White).—First, R. Chase, Balsall Heath, Birmingham. Second, Rev. F. Taylor, Keastwick, Kirkby Lonsdale. **Chickens.**—First

and Second, Rev. F. Taylor, Keastwick, Kirkby Lonsdale.

BAHAMA POULTEAS.—First, Mrs. Hargreaves, Arborfield Hall, near Reading. Second, R. W. Boyle, Dundrum, Dublin. **Chickens.**—First,

R. W. Boyle, Dundrum, Dublin. Second, W. L. Barclay, Knott's Green, Leyton, London, N.E. Third, T. Statter, Stand Hill, Manchester.

MALAY.—First, Rev. A. G. Brooke, Ruyton XI Towns, Salop. Second, Master C. A. Ballance, 5, Mount Terrace, Taunton, Somerset. **Chickens.**

—First, Rev. A. G. Brooke, Ruyton XI Towns, Salop. Second, Miss C. H. Ballance, 5, Mount Terrace, Taunton, Somerset.

CAKYE-CAYE.—First, J. Harrison, 14, Central Beach, Blackpool. Second, A. Dixon, Birches Green, Birmingham. **Chickens.**—First, J. Harrison,

Blackpool. Second, W. Blinbhorn, jun., Peasley House, St. Helen's, Lancashire.

BLACK HAMBOUGH.—First, R. F. Goodwin, Middleton, near Manchester. Second, F. Sabin, Birmingham. Third, W. W. Nicholls, Sale, near Man-

chester. **Chickens.**—First, S. Shaw, Stainland, Halifax. Second, R. F. Goodwin, Middleton, near Manchester. Third, J. Dixon, North Park,

Clayton, Bradford.

HAMBOUGH (Golden-pencilled).—First, J. E. Powers, Bigglewade, Beds. Second, C. Tattersall, Waterfoot, near Manchester. Third, S. Shaw,

Stainland, Halifax. **Chickens.**—First, F. Pittis, jun., Newport House, Newport, Isle of Wight. Second, Sir St. G. Gore, Bart., Hopton Hall,

near Wirksworth, Derbyshire. Third, C. Moore, Poulton-le-Fylde, near Preston.

HAMBOUGH (Silver-pencilled).—First, W. Wood, Sheffield. Second, J. Preston, Allerton, near Bradford. Third, H. Beldon, Gilstead, Yorkshire,

Chickens.—First, D. Harding, Middlewich, Cheshire. Second, S. Shaw, Stainland, Halifax. Third, J. Robinson, Vale House, near Garstang.

HAMBOUGH HENS (Pencilled).—First, J. Lowe, Whitmore House, near Birmingham (Golden). Second, J. Robinson, Vale House, near Garstang.

HAMBOUGH PULLETS (Pencilled).—First, W. H. Dyson, Snap Farm, Horton Bank Top, near Bradford, York-hire (Golden). Second, Sir St. G.

Gore, Bart., Hopton Hall, near Wirksworth, Derbyshire.

HAMBOUGH (Golden-spangled).—First, I. Davies, Harborne. Second, Sir St. G. Gore, Bart., Derbyshire. Third, J. Robinson. **Chickens.**—First,

S. H. Hyke, Taunton Hall, Ashton-under-Lyne. Second, Sir St. G. Gore, Bart. Third, W. Kershaw, Heywood, near Manchester.

HAMBURGH (Silver-spangled).—First, Sir St. G. Gore, Bart. Second, Miss E. Beldon, Gilstead, Bingley, Yorkshire. Third, J. Fielding, Newchurch, near Manchester. *Chickens.*—First, J. Fielding. Second, Mrs. Hurt, Alderwasley, Belper. Third, Miss E. Beldon.

HAMBURGH HENS (Spangled).—First, J. Roe, Hadfield, near Manchester. Second, G. E. Hardman, Rawtenstall, Manchester.

HAMBURGH PULLETS (Spangled).—First, J. Leech, Staffordshire. Second, The Right Hon. the Viscountess Holmesdale, Linton Park, Kent.

POLISH FOWL (Black with White Crests).—First and Second, T. P. Edwards, Lyndhurst, Hants. Third, W. Newsome, Bingley, Yorkshire. *Chickens.*—First, Second, and Third, J. Smith, Kelghley, Yorkshire.

POLISH FOWLS (Golden).—First, Miss E. Beldon, Gilstead. Second, F. R. Pease, Southend, Darlington. Third, S. Shaw. *Chickens.*—First, W. Newsome, Bingley, Yorkshire. Second and Third, F. R. Pease.

POLISH FOWLS (Silver).—First and Second, G. C. Adkins, The Lightwoods, Birmingham. Third, H. Beldon, Gilstead. *Chickens.*—First, Miss E. Beldon, Gilstead. Second and Third, G. C. Adkins.

ANY OTHER DISTINCT VARIETY.—First, F. H. Neville, Edgbaston (Cuckoo Dorking). Second, E. Pigeon, Lympstone, near Exeter (La Flèche). Third, Mrs. D. Haig, Lichfield (Maggie Tarlans).

GAME FOWL (Black-breasted Reds).—First, Sir St. G. Gore, Bart., Wirksworth, Derbyshire. Second, Miss K. Charlton, Bradford. Third, J. H. Williams, Spring Bank, near Welshpool. Fourth, J. Halsall, Ince, near Wigan. *Chickens.*—First, R. Woods, Osberton, Worksop, Notts. Second, J. Halsall. Third, A. B. Dyas, Madeley, Shropshire. Fourth, Capt. Wetherall, Loddington, near Kettering.

GAME FOWLS (Brown and other Reds, except Black-breasted).—First and Cup, T. Statter, Manchester. Second, J. Wood, Wigan. Third, G. Hellewell, Walkley, near Sheffield. Fourth, H. Adams, Beverley. *Chickens.*—First, J. Wood. Second and Fourth, E. Aykroyd, Bradford. Third, M. Billing, jun., Erdington, near Birmingham.

GAME HENS (Black-breasted and other Reds).—First, E. Aykroyd, Bradford. Second, J. Wood, Wigan.

GAME PULLETS (Black-breasted and other Reds).—First, Mrs. Hay, Subbury, Derby. Second, C. Minor, Sudbury, Derby.

GAME (Duckwings, and other Greys and Blues).—First, Sir St. G. Gore, Bart., Wirksworth, Derbyshire. Second, W. Gamon, The Green, Thornton-le-Moors, Chester. Third, T. Carless, Hoovers, near Nottingham. Fourth, E. T. Reynolds, Tysley, Birmingham. *Chickens.*—First, E. Aykroyd, Bradford, Yorkshire. Second, Sir St. G. Gore. Third, J. Holme, Knowsley, Prescott. Fourth, T. Carless.

GAME (Black and Brassy-winged, except Greys).—First, J. Fletcher, Stoneclough, Manchester. Second, Messrs. Bullock and Rapson, Leamington. Third, H. Beldon, Gilstead, Bingley, Yorkshire. *Chickens.*—First, J. Fletcher. Second, H. Beldon. Third, J. L. Newsome, Batley, Leeds.

GAME (White and Piles).—First, Captain C. Curtis, Lutterworth. Second, J. Fletcher, Stoneclough, Manchester. Third, Rev. F. Watson, Messing, Kelvedon. *Chickens.*—First, J. Fletcher. Second, J. Sunderland, Halifax. Third, Rev. G. S. Cruwys, Tiverton, Devon.

GAME HENS (Except Black-breasted and other Reds).—First, Sir St. G. Gore, Bart., Wirksworth, Derbyshire. Second, E. T. Reynolds, Tysley, Birmingham.

GAME PULLETS (Except Black-breasted and other Reds).—First, H. Worrall, West Derby, Liverpool. Second, J. H. Williams, Welshpool.

SINGLE COCKS.

DORKING.—First, E. Tudman, Whitchurch, Salop. Second, J. Robinson, Garstang. Third, Lady S. Des Vœux, Burton-upon-Trent. Fourth, Right Hon. Viscountess Holmesdale, Kent. Fifth, Mrs. Arkwright, Ewell Hall, Derby.

SPANISH.—First, H. Lane, Milk Street, Bristol. Second, H. C. Mobbs, Northampton. Third, D. Parsley, Rock Cottage, Bristol.

COCHIN-CHINA (Cinnamon and Buff).—First and Third, Capt. H. Heaton, Lower Broughton, Manchester. Second, Mrs. R. White, Broomhall Park, Sheffield.

COCHIN-CHINA (Except Cinnamon and Buff).—First, J. Poole, Ulverston, Lancashire. Second, R. White, Broomhall Park, Sheffield. Third, C. H. Wakefield, Malvern Wells.

BRAHMA POOTRA.—First, E. Pigeon, Lympstone, near Exeter. Second, T. Statter, Stand, Manchester. Third, R. W. Boyle, Dundrum, Dublin.

HAMBURGH (Golden-pencilled).—First, H. Beldon, Gilstead, Bingley, Yorkshire. Second and Third, Rev. R. Roy, Worcester.

HAMBURGH (Silver-pencilled).—First, C. Moore, Poulton-le-Fylde, Preston. Second, J. Holland, Worcester. Third, Sir St. G. Gore, Bart., Hopton Hall, near Wirksworth, Derbyshire.

HAMBURGH (Golden-spangled).—First, W. Kershaw, Heywood, near Manchester. Second, Messrs. Bray, Broadhead, & Wilkinson, Choppards, Holmfirth, Yorkshire. Third, Messrs. Burch & Boulter, Sheffield.

HAMBURGH (Silver-spangled).—First, J. Fielding, Newchurch, near Manchester. Second, B. M. Clive, The Highfields, Gravelly Hill, near Birmingham. Third, T. Burns, Leigh, near Manchester.

POLISH.—First, W. Newsome, Bingley. Second, J. Smith, Kelghley. Third, H. Beldon, Gilstead.

GAME (White and Piles, Duckwings, and other varieties, except Reds).—First, E. Aykroyd, Bradford. Second, M. Billing, jun., Erdington, near Birmingham. Third, J. Halsall, Wigan. Fourth, J. H. Williams, Welshpool.

GAME (Black-breasted Reds).—First and Second, J. H. Williams, Welshpool. Third, E. C. Gilbert, Penkridge, Staffordshire. Fourth, W. Boyes, Beverley.

GAME (Brown and other Reds, except Black-breasted).—First and Cup, T. Statter, Manchester. First, J. Smith. Second, J. Fletcher. Third, M. Billing, jun., Erdington, near Birmingham. Fourth, G. Clement, Birmingham.

BANTAMS (Gold-laced).—First, M. Leno, jun., Dunstable, Bedfordshire. Second and Third, U. Spray, Dunstable, Bedfordshire.

BANTAMS (Silver-laced).—First, U. Spray, Dunstable, Bedfordshire. Second and Third, M. Leno, jun., Dunstable.

BANTAMS (White, Clean-legged).—First, W. Draycott, Humberstone, near Leicester. Second, Rev. F. Tearle, Leicester. Third, W. Watson, Calstock, Tavistock.

BANTAMS (Black, Clean-legged).—First, T. Davies, Newport, Monmouth. Second, Miss K. Charlton, Bradford. Third, J. Bradwell, Southwell, Nottinghamshire.

BANTAMS (Any other variety except Game).—First, W. J. Cope, Barnsley (Pekin). Second, W. Harvey, Sheffield.

GAME BANTAMS (Black-breasted and other Red).—Miss E. Crawford, Farnfield, Southwell. Second, J. W. Kelleway, Merston, Isle of Wight. Third, Sir St. G. Gore, Bart., Hopton Hall, Wirksworth, Derbyshire. Fourth, Hon. W. T. W. Fitzwilliam, Wentworth Wood House, Rotherham.

GAME BANTAMS (Any other variety).—First, R. B. Postana, Brentwood, Essex. Second, R. Hawkey, jun., Southwell, Nottinghamshire. Third, J. W. Kelleway, Merston, Isle of Wight.

GAME BANTAM COCKS.—First, J. W. Kelleway, Merston, Isle of Wight. Second, C. Aukland, Heetwell Cottage, Chesterfield. Third, R. B. Postana, Brentwood, Essex.

DUCKS (White Aylesbury).—First and Third, Mrs. Seamons, Hartw 1 Aylesbury, Buckinghamshire. Second, J. K. Fowler, Prebendal Farm Aylesbury.

DUCKS (Rouen).—First, S. Shaw, Stainland, Halifax. Second, H. Worrall, West Derby, Liverpool. Third, J. Anderson, Meigle, N.B. Fourth, Capt. W. Hornby, Prescott.

DUCKS (Black East Indian).—First, J. W. Kelleway, Merston, Isle of Wight. Second, Mrs. Hayne, Fordington, Dorchester.

DUCKS (Any other variety).—First, S. Shaw, Stainland. Second, R. P. Williams, Glaslenn, Dublin.

GESEZ (White).—First, W. K. Duxbury, Leeds. Second, W. Kershaw, Heywood. Third, J. Faulkner, Burton-upon-Trent.

GESEZ (White).—First, Mrs. Seamons, Hartwell, Aylesbury, Bucks. Second, J. Lycett, Marston Villa, Stafford.

GESEZ (Grey and Mottled).—First, W. H. Denison, Woburn, Beds (Toulnouse). Second, J. Lycett, Stafford. Third, Her Grace the Duchess of Marlborough, Blenheim Palace, Woodstock, Oxford.

GESEZ (Grey and Mottled).—First, Mrs. Seamons, Hartwell, Aylesbury, Bucks. Second, W. Lort, jun., King's Norton, near Birmingham (Old English).

TURKEYS.—First, J. Smith, Breeder Hills, near Grantham (Cambridge). Second, Rev. H. G. Bally, Swindon (Cambridge). Third, G. R. Dartnell, Arden House, Henley-in-Arden (Norfolk). *Poult.*—First, Mr. C. Browne, Withington, Shrewsbury (Cambridge). Second, J. Beasley, Brampton, Northampton (Cambridge). Third, J. Smith (Cambridge).

PIGEONS.

TUMBLERS (Almond).—First, F. Kise, Westbourne Grove, Bayswater, London. Second, F. Esquilant, Oxford Street, London. Third, P. Eden, Cross Lane, Salford, Manchester.

CARRIER (Black).—Cock.—First, F. Elze. Second, P. Eden. *Hens.*—First, F. Elze. Second, P. Eden.

CARRIER (Any other colour).—Cock.—First, P. Eden, Salford. Second, Messrs. W. Siddons & Sons, Aston. *Hens.*—First, Messrs. W. Siddons and Sons. Second, F. Elze, Baywater.

POWTER (Red or Blue).—Cock.—First, G. R. Potts, Sunderland. Second, P. Eden, Salford. *Hens.*—First, G. R. Potts. Second, P. Eden.

POWTER (Any other colour).—Cock.—First, P. Eden, Salford. Second, F. Elze, Baywater. *Hens.*—First, G. R. Potts, Sunderland. Second, P. Eden, Salford.

BALDS.—First, T. Ridpath, Rusholme, Manchester. Second, F. Esquilant.

BRABS.—First, W. H. C. Oates, Beethorpe, Newark. Second, F. Elze.

TUMBLERS (Mottled).—First and Second, P. Eden, Salford.

TUMBLERS (Any other colour).—First, J. Fielding, jun., Rochdale. Second, J. Ford, London.

ROUTE.—First, T. D. Green, Saffron Walden, Essex. Second, C. Balpin, Bridgewater.

JACOBS (Yellow).—First and Second, J. T. Lawrence, Breckfield, Everton, Liverpool.

JACOBS (Any other Colour).—First, J. T. Lawrence, Liverpool. Second, T. Ridpath, Poplar House, Rusholme, Manchester.

FANTAILS (White).—First, C. F. Allison, Friar's Place, Acton, Middlesex. Second, T. Ridpath, Poplar House, Rusholme, Manchester.

FANTAILS (Any other colour).—First, F. H. Fagot, Birstall, Leicestershire. Second, J. W. Edge, Aston New Town, Birmingham.

TRUMPETERS (Mottled).—First, S. Shaw, Stainland, Halifax. Second, J. R. Robinson, Sunderland.

TRUMPETERS (Any other Colour).—First, S. Shaw, Stainland, Halifax. Second, W. H. C. Oates, Beethorpe, Newark.

OWLS (Blue or Silver).—First, P. Eden, Cross Lane, Salford. Second, J. Fielding, jun., Rochdale.

OWLS (Any other Colour).—First, G. H. Sanday, Holme Pierrepont, Nottingham. Second, P. Eden, Cross Lane, Salford.

NUNS.—First, F. Elze, Baywater, London, W. Second, T. Ridpath, Poplar House, Rusholme, Manchester. Third, Rev. A. G. Brooke, Rayton XI. Towns, Salop.

TURBOTS (Red or Blue).—First, J. W. Edge, Aston New Town, Birmingham. Second, S. Shaw, Stainland, Halifax.

TURBOTS (Any other Colour).—First, J. Percival, Peckham, Surrey. Second, S. Shaw, Stainland, Halifax.

BARBS (Black).—First, P. Eden, Salford. Second, S. Shaw, Stainland.

BARBS (Any other colour).—First, P. Eden, Salford. Second, W. H. C. Oates, Beethorpe, Newark.

DRAGONS.—First, H. Yardley, Birmingham. Second, S. Shaw, Halifax.

MAGPIES.—First, S. Shaw, Halifax. Second, C. M. Royds, Rochdale.

ANTWERPS.—First, H. Yardley, Birmingham. Second, T. Ridpath, Rusholme, Manchester.

ARCHANGELS.—First, H. Yardley, Birmingham. Second, J. Percival, Peckham, Surrey.

ANY OTHER NEW OR DISTINCT VARIETY.—First, S. Shaw, Halifax. Second, H. Yardley, Birmingham. Third, A. Heath, Calne, Wilts.

BRAHMA POOTRAS.

NOTWITHSTANDING your recent fiat that a Brahma is only a Cochin in masquerade, I am not discouraged and without assuming to be either Attorney or Attorney-General for Brahma Pootra Land, or any other land, from supporting the opinion of your correspondent "B." that the breeds are distinct. Their breeding true to colour is not a decisive

proof I admit, but that is not the point. Their not breeding true to colour would have been direct evidence against them. Stability in this respect negatives an adverse testimony.

As to the American story, I confess that I lay little stress, if any, upon it, or any other Yankee story, if against usual experience. It is not remarkable for clearness in itself. I do not intend to take up the question of origin of species. That I leave to Heaven and Mr. Darwin. But if Brahmas were really in the beginning a cross between a Cochin and a Chittagong, then a Chittagong and a Cochin have originated a breed and that is all. I never saw a Chittagong, but it is said by the books to be a cross between Malay and Dorking. In that case, a cross again with a Cochin, retaining permanently its peculiar type, would be an anomaly indeed. However, let me suggest an *experimentum crucis*. Let some enterprising spirit cross a Malay and a Dorking and obtain a Chittagong. Cross this Chittagong with a Cochin, and if the produce has all the characteristics of a Brahma, *cadet questio*. There is an end of the matter.

But, sir, if constancy in the peculiar habits, disposition, and properties of a bird are no evidence of breed, I am at a loss to know what is. Varieties of Cochins differ in colour, but in these respects they are all alike. So with Dorkings. So with Hamburgs and other varieties of the same breed. And in these respects there is as wide a difference between a Cochin and a Brahma, as between any two distinct breeds whatever. Their mode of laying is quite different. The Cochin lays a few eggs and then sits. She leaves her young often prematurely to lay and sit again. The Brahma lays a great many eggs—a hundred or more—before she sits, and usually sits but once and rears her brood carefully. The eggs are rather different in shape. They are a little rougher in the shell so as to be discerned by the feel, such, at least, is my experience. Their chickens are easier to rear. They put on flesh more readily. They, perhaps, range something wider. The crow of the cock is very different, nearer the note of chanticleer than that dying bray of the donkey, which is by no means suggestive of nightingales. It may, perhaps, be alleged that he gets this note from the Dorking quartering in the Chittagong side of his shield. He is by no means so cowardly a bird, and will stand boldly up to a Game cock and punish him, as I know to my cost. If all these peculiar characteristics with an aspect and colour constant and sufficiently distinct are marks only of a Cochin merely varying in feather, it is certainly the most remarkable variety known to the poultry world.

In point of fact, it is these very characteristics that stamp their value on any breed. It is for their peculiar excellence in these qualities, not for their feathers, that different breeds are approved and carefully kept pure. If it was not for their pre-eminence as layers, neither comb, nor hackle, nor spangle, nor pencil, could keep the Hamburgs from oblivion. To disregard such important distinctions seems impossible. It is not because it is a variety of Cochin that the Brahma is kept up and highly prized, but because it possesses peculiar and valuable properties of its own to which the Cochin has no pretensions whatever.—IMPLUMIS.

[Admitting all the merits that our animated correspondent claims for Brahma Pootras, yet those merits are no more than characterise a variety. The same may be said of the Coloured Dorking as compared to the White Dorking and others. All the essential characteristics of form and plumage are the same in the Cochin-China and the Brahma Pootra. We have no expectation that the cross-breeding suggested would do more than demonstrate that the Brahma is a variety of the Cochin-China, but we fear that even that would not alter the opinion of our correspondent. He ignores direct evidence as a mere Yankee story, and it has been recorded as a result of experience, that

"A man convinced against his will
Is of the same opinion still."]

GLASGOW PIGEON AND CANARY SHOW.

HAVING been from home I did not receive my usual copy of your Journal until to-day, and on looking over the report of the Sunderland Show I was somewhat surprised to find stated therein that the "Glasgow Show was given up." I

have merely to refer you to the advertising columns of your own Journal of the same date (8th inst.), to show the inconsistency of this, I believe inadvertent, statement. There has been a slight change this year in the management, but that is no reason why such a statement should have crept into your report.

As the originator of the Glasgow Show and present Secretary, I certainly feel happy to think that it should have been considered a model Show, and I trust that it will always continue such. I enclose you a prize list which is more intended to produce honourable competition than pecuniary gain.—JAMES RUTHEVEN, Secretary.

[The gentleman who sent us a report of the Sunderland Show we are quite sure only repeated what he was told, and he will rejoice, as we do, that he was misinformed.

The Glasgow Show is to be held on the 23rd and 24th of December. The prizes are liberal in money, in addition to medals and other rewards; and as every variety and sub-variety has a separate class, the Show especially deserves the support of Pigeon and Canary fanciers.]

THE ORIGIN OF BRAHMAS.

MANY years ago, when Brahmas were not the "household birds" they have now become, I seized my pen and, like many others, rushed into print in defence of my pets. I well recollect there was a long wordy war, but it reminded me somewhat of the tale told of a gentleman rather noted for his longwinded descriptions always given in a somewhat legal manner. This person on one occasion, meeting a friend evidently in a great hurry, nevertheless secured him as a listener, commenced his minute description, and after detaining his impatient friend on tenter hooks for a considerable time, he wound up with this appeal—"Now, do not you think that perfectly conclusive?" "Oh, not the shadow of a doubt about it," said his impatient friend, glad of the respite; "I wish you good morning." "Hold," says the other, "wait one minute; there is as much to be said on the other side of the question." His friend, however, bolted, saying he was perfectly convinced.

Brahma origin is like this, there is a vast deal to be said for and against according to our bias; but, perhaps, it only wastes the time of impatient friends, so I say honestly at once, although I have headed this communication as I have done, that I do not intend at present to enter into the discussion, I plead guilty to having felt awfully pugnacious on this topic once or twice lately—first with Mr. B. P. Brent, when I vented my spleen on paper for "our Journal," but saved the readers the infliction. Quite recently, dear Messrs. Editors, with yourselves, when you gave my pets that quiet dig in the ribs, and gave it as your opinion that the bar sinister belonged to them. If I had not a wondrous kindly feeling for "our Editors" as well as "our Journal" I might have called you out, and, being but a small man myself, would not have objected to my size being chalked out on your body—"all shots outside the line not to count!"

The question of altering names has been mooted on several occasions of late, and you gave us a pretty list lately for our pets, but I am content with "Brahma." It is as euphonious as Dorking or any other name, so it appears to me, and, therefore, I shall not adopt "Bahama Padua," or any other of the crackjaw names, even although "a rose by any other name might smell as sweet." Still, in these notes, I was much tickled with one thing, and I must say that, according to those notes, we Brahma breeders are remarkably clever fellows. You said the first ever shown had "unmistakeable topknots," I quote from memory. Well, where are these topknots gone? Why do not Game-fanciers come to us for the secret? then there would be no occasion to trim their birds! What wonderful deplumatory have we used, and why is it not advertised?

Joking apart, dear Messrs. Editors, although, on second thoughts, I shall not call you out, as even a hit outside the chalk line might injure "our Journal," I nevertheless shall send you a challenge. It is this—state what you consider the marks of a pure breed, then, perhaps, some of us may have a word or two more to say in defence; and come what may, if you prove us the most wretched mongrels that ever existed, I shall reply, "Handsome is that handsome does,"

I might have said "looks;" but I will write no more than—Y. B. A. Z.

Since writing the above, "our Journal" with "B.'s" letter has reached me. I will only add, taking your words, that I want the "essentials on which a distinct breed can be founded." I should also like to know the breeds you do consider pure, we shall then have some foundation for the discussion.—Y. B. A. Z.

RAILWAY CHARGES FOR POULTRY CARRIAGE.

I NOTICE with much satisfaction that some one has ventilated the question of the high rates charged for carriage of poultry by railway companies in general, and the London and North-Western in particular.

Having large dealings with the latter company, I tried the effect of individual influence and representation, but in vain. On many others besides myself, who live at a great distance from all shows, this high carriage question becomes a grinding oppression, and reduces in many cases our contributions to shows to a very small minimum. If a united appeal were to be made by a united body of exhibitors, such as meet at Birmingham, I am sure the directors would at once mitigate the evil complained of, which is so much at variance with the spirit of the age, and which while it checks progress, must curtail those profits which from poultry shows and exhibitors ought to be something considerable.

While carrying unsold stock back free, on what principle is an extra rate levied on poultry? What has the feathered world done to merit so unenviable a distinction?—VICTIM.

THE SWARMING SYSTEM.

FROM my own observations this year and last, I am satisfied that hives which are permitted to swarm, if forward, will yield a larger harvest of honey than they would do if kept upon the conservative principle. I made a swarm on the 18th of May by taking a frame out of a bar-and-frame hive with the queen, and then placing it in an empty hive which was then located upon the stand of the old hive. I weighed this swarm a few days ago, and found it weighed about 40 lbs. nett. At the end of July it would have been at least 7 or 8 lbs. more, as my bees have done nothing since that time. A second swarm was made from the same stock, yet the old hive was equal in weight to the first swarm. Three storified hives yielded on an average 35 lbs. each of pure honey in their supers; but the stock hives were in each case very light, and required copious feeding to make them safe for the winter. Other hives which swarmed were very heavy.—J. E. B.

BEEES CAREFULLY FEASTED.

WE are told by the wise man that "There is nothing new under the sun;" and although sorry to brush off the bloom of novelty from "EVEY BLUSH's" proposition of making our poorer hives sharers in our Christmas festivities, I may relate a circumstance of a somewhat similar kind which I am assured actually took place.

Among the superstitions yet current in some parts of this county is one which would certainly commend itself to the sympathies of Jonas Jackson if he ever heard of it; and if he has not, I hope he will forthwith add it to the list of customs which he has already promulgated, and the religious observance of which he proclaims to be essentially necessary to all who would attain eminence in the occult mystery of successful bee-keeping.* Not only is it requisite, as he says, whenever any joyous event takes place, such as a marriage or a christening, to make the bees partakers of the good cheer provided for the occasion, but it is absolutely essential that no one item of either the dainties or the substantial should be omitted.

The evening of the day which had witnessed the departure of a newly married couple having arrived, the "gude man" proceeded to question his spouse as to the due fulfilment of the indispensable ceremony of presenting the bees with a

* Vide JOURNAL OF HORTICULTURE, Vol. V., page 99.

modicum of every eatable and drinkable that had been provided for the wedding feast. "Had they had a bit of the turkey, the chicken, the ham, the boiled beef, and, though last not least, the wedding cake?" "Yes." "Some of the spirits [rum, I hope, not being omitted], ale [Scotch, of course], and cider?" "Yes." "Baccy?" "No, what could they do with baccy? bees can't smoke," urged the wife. "Nonsense, Betty," replied her lord and master; if they can't smoke they can chaw!" And so the omission was supplied in good time, "baccy" being forthwith added to the previously incomplete list of dainties; and having been, we may presume, in due course "catawampiously chawed up," as the Yankees have it, the care and anxiety of the worthy couple were doubtless rewarded by the continued and unflinching prosperity of their well-cared-for apiary.—A DEVONSHIRE BEE-KEEPER.

COWS MILKING THEMSELVES.—I know for a certainty that cows sometimes do suck themselves. The proper remedy—the one used in the Vale of Black Moor, in the county of Dorset—is a headstall with spikes in the nose-band.—W. F. RADCLIFFE, *Rushiton*.

OUR LETTER BOX.

EDITORIAL RESPONSIBILITY (*H.*).—Your informant, and the correspondent in a contemporary, are totally wrong. No one, except the two gentlemen whose names appear upon our first page, has any control over the editing of this Journal. They are responsible for all its contents, and nothing appears in its columns without their assent.

GIDDY GOOSE (*G. A.*).—A small blood vessel has burst upon the brain. Quiet and the avoidance of hard corn are your only available helps.

WHITE COCHIN-CHINA FOWLS (*A Very Old Subscriber*).—We do not know the address, and certainly would have no dealings with the person you name. Write to some of the prize-takers, or, what is better, go to some poultry exhibition, and buy pullets from one exhibitor and a cockerel from another.

HENS EATING THE EGGS THEY ARE SITTING ON (*J. W.*).—Hens with such a habit as you mention should be marked for the kitchen, and killed as soon as they have done laying. To allow such to sit is to jeopardise valuable broods at this season of the year. The driver of a Hansom cab in which we were riding a short time since, assured us, when the horse had kicked away all the front except the iron framework, that "There never was a quiver on after the first few minutes." In fact he was fresh. We should like in future to have him well worked before we rode behind him. It may be your hen, like the cab horse, is only vicious "at first." Therefore, if you wish to retain her services, put her for some days on some good hard artificial eggs. She will peck them till she is tired, and will then give up the job in disgust. We can hardly give an opinion about the pen of Dorkings at Islington. Mistakes are unavoidable sometimes, and this may have been one.

BANTAMS WITH COCHIN-CHINAS (*Freeland*).—We say yes. We have done it for years with perfect safety.

POULTRY EATING WALNUT HUSKS (*J. M.*).—We have never known the green husks of walnuts to injure poultry. We have two pens entirely shrouded with walnut trees, and after they are threshed the ground is covered with husks. We have never seen fowls pick them up. We shall feel glad to have the opinions of competent persons as to the properties of these husks. Our correspondent had a Dorking cockerel die after thirty-six hours illness. His crop was full of walnut husks.

WHITE FLUFF AT BASE OF BLACK RED GAME COCK'S TAIL (*A Dealer*).—Yes! it is always there. The amount is uncertain, and varies much. It is not a desirable thing in an exhibition bird, nor indeed in any other. If two birds of equal merit and value were offered to us, but one had this peculiarity more developed than the other, we should reject him on that account.

TRAINING HIGH-FLYING TUMBLER PIGEONS (*W. O. T.*).—Your best and easiest way is to obtain a few pairs of already-trained highfliers, which will save you much trouble. If, however, you have already a breed of good pedigree which you wish to train, you must take the trouble to see that they are well looked after, fed on good food, as peas, tares, lentils, or Indian corn; that all that can fly well are turned out once a-day, in the morning is best, and put on the wing. At first you must make them fly, if it is only for five minutes. The time can be gradually increased, until they will fly without trouble for from two to four hours. As soon as they settle they should be coaxed in, and kept confined for the rest of the day; nor must they be allowed to fly about with other Pigeons. As they become accustomed to daily exercise they will not have much desire to feed until they have flown. To prevent their going out quite empty it is as well to give them a small feed of hemp or canary seed; but they must not be full fed, for they cannot fly well with a heavy crop full, but after a long fly they will eat ravenously. Care must be taken to associate being out with flying. Lasy birds, sick ones, or such as have a bad habit of settling on some chimney or high building, must not be let out, or had better be got rid of.—B. P. BARR.

LOVE BIRDS DYING (*A Lady Subscriber*).—It is impossible to say what was the cause of your birds dying. The general treatment is to keep them warm and feed them on canary seed; also give them, in a separate feeding-box, some millet, and occasionally a few oats (soaked all night in cold water), and the tops of watercresses sparingly. Groundsel is only good for them in the spring of the year, and the early part of the summer, and then but very sparingly. We presume that you have given them water, which is necessary.

WEEKLY CALENDAR.

Day of Month.	Day of Week.	DECEMBER 6-12, 1884.	Average Temperature near London.			Rain in last 37 years.	Sun. Rises.	Sun. Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock after Sun.	Day of Year.
6	Tu	Annual Meadow Grass flowers.	Day.	Night.	Mean.	Days.	m. h.	m. h.	m. h.	m. h.		m. s.	
7	W	Winter commences.	47.7	36.1	41.4	19	53 a 7	50 a 3	15 0	morn.	7	8 57	341
8	Th	Common Chickweed flowers.	46.1	36.6	42.1	18	54 7	50 3	40 0	81 0	8	8 6	342
9	F	Skylarks congregate.	43.8	34.0	38.9	16	55 7	48 8	7 1	49 1	9	7 46	343
10	S	Polyanthus flowers.	42.5	34.7	41.1	15	56 7	49 3	36 1	5 8	10	7 13	344
11	Su	8 SUNDAY IN ADVENT.	46.7	33.3	40.0	24	58 7	49 3	11 2	19 4	11	6 45	345
12	M	Wallflower in bloom.	45.5	32.4	39.0	16	59 7	49 3	51 2	33 5	12	6 18	346
			45.6	32.7	39.6	16	0 8	49 3	50 3	40 6	13	5 56	347

From observations taken near London during the last thirty-seven years, the average day temperature of the week is 45.3°, and its night temperature 34.6°. The greatest heat was 68° on the 12th, 1841; and the lowest cold, 16°, on the 9th, 1861. The greatest fall of rain was 1.03 inch.

ORNAMENTAL TREES AND SHRUBS.



ALTHOUGH many valuable introductions of ornamental trees and shrubs have been made during the past twenty years, our parks and pleasure grounds remain in much the same condition as regards the general features produced by ornamental trees as before the introduction of those novelties.

Whether we examine public or private parks and pleasure grounds, the sameness of the materials employed renders the landscape monotonous, and leaves nothing for the eye to fix on. Taking the majority of our parks from the enclosure of ten up to that of a thousand acres in extent, in them we find nothing of interest in the way of trees, except those peculiar to the soil, and which may have sprung up from self-sown seeds, or been part of the original forest, so far as there is any indication of their being there for the purpose of embellishment. There are thousands upon thousands of acres of parks of various sizes, the trees of which are in an ornamental point of view utterly valueless, remaining year after year without answering any purpose, producing an inharmonious, uninteresting landscape of a monotonous aspect, most wretched as a picture, and commonplace as to the trees employed. In many places the whole of the sylvan shade and glade is furnished by very few species; some cannot boast of more than a dozen, others of not more than two or three, and most of these species are indigenous to the locality.

This state of things may at first thought appear desirable, for it is desirable where many acres of land are occupied with trees, that they should pay. In a commercial point of view, such trees as those above referred to, are no less deceptive than when considered as ornaments, for they, like hedgerow timber, are unremunerative, and so are all trees standing singly, or wide apart in groups. I found that in a wood of large dimensions fifty Oak trees, calculated to be between two and three hundred years old, occupied less ground with the spread of the branches than ten of the same age planted singly in a park, and though the latter were much larger in circumference of stems, they had such short stems that each did not contain one-half the amount of the measurable timber of those in the wood. If this be a fair example of the paying qualities of park timber, the question of profit is at once disposed of, and the ornamental value of the trees being equally small, we are left in the dark as to what prompts their toleration. It is undoubtedly wise to plant, or retain if planted, a number of trees of the kinds common or indigenous to the locality, in order to afford shelter to the more tender, and to show the character of the district; but to retain an undue proportion of such to the exclusion of species which are

more desirable, because calculated to do away with the monotony, and equally valuable as timber, would lead to the conclusion that they are kept at a dead loss to the owner through the deterioration of the timber from natural decay. Irrespective of their not paying, they are ineffective from being badly placed and resembling a jungle. It may seem undesirable to plant to produce that sublimity which some see in rotten trees, and I can only say, an object naturally beautiful is doubly so when it is also useful.

Viewing the subject with a like eye in relation to our gardens, the same remarks hold good, though there is the difference that no one expects trees and shrubs in gardens to pay, but to yield an amount of gratification corresponding to the sum expended. There is a great deal of sameness in the trees and shrubs employed, and a great consequent loss of pleasure, and the interest is all but annihilated. This is a most deplorable state of things.

The choice of forest trees for the embellishment of gardens is another prevalent error, as for size they bear no proportion to the situations in which they are placed. Suiting the size of trees to the extent of the grounds in which they are to be placed, though of great importance is very generally disregarded. Trees of some kind are indispensable in all gardens, for whilst they give beauty, they also afford an agreeable shade during the hot days of summer; but planted, as they often are, in small gardens, they must either be curtailed by frequent cuttings or mutilations, or be left to usurp the whole of the contracted space to the exclusion of species better suited, as regards size, to the extent of the ground. These large trees in a few years, supposing them to have been planted small, attain such a size as to smother everything else, rendering it altogether impossible to have variety, for very few shrubs or plants will grow under them, and to have either green turf or healthy flowers; the two grand objects for which gardens are desired, is impossible.

Then, taste in the distribution of the trees and shrubs in gardens is very much sinned against. It is common to find evergreen and deciduous trees and shrubs planted on lawns singly, or in groups, with flower-beds between them. The single trees bear no relation to the groups, and the beds are not connected with them, and the consequence is, they do not combine so as to form either a regular or symmetrical whole. It certainly is highly pleasing and picturesque to see trees, shrubs, and flowers all struggling together for the mastery in a natural state; but this sort of beauty is unsuitable for garden scenery. The object of collecting trees, shrubs, and flowers in gardens, is to produce them in a higher degree of perfection, and to show them off to greater advantage than can be done in a state of nature. Whatever in the planting, cultivation, or management of a garden interferes with these two objects, the perfection of the plant, and its display to the greatest advantage, is wrong.

Now, the indiscriminate mixture or distribution of ligneous and herbaceous plants on a lawn, leads to no good result, but the effect of one injures the other. They cannot form a picture. The expression of a tree is one of grandeur and dignity, and to be impressed with this the eye must be at a certain distance from the object, so as to comprehend the trunk, branches, and head, as a whole. As to a shrub or a clump of such, it cannot be denied that its beauty is of a very different kind from that of an herbaceous plant. On the other hand, the expression of an herbaceous plant in flower is that of brilliancy of colour, and beauty of detail, and to enjoy these, the eye must be quite near, so that it may be directed to the flower and its different parts.

The beauty of any object or scene consists in the unity of expression—that is, in the tendency of all the parts of that object or scene to unite in conveying to the mind a pleasing impression. But, with the mixture of trees, shrubs, and flowers, they each detract from, instead of uniting to form a whole. To enjoy the flowers the eye must look down, and be exclusively directed to them; and to enjoy the trees the flowers must be overlooked. A picture, a scene, or an object, to be appreciated as a whole, and to produce its full impression on the mind, must be capable of being seen with the eye in one fixed position. There are two distinct kinds of scenery—1st, forest-like; and, 2nd, garden-like scenery; and these distinctions are founded on the principle that the mind can only attend to one thing, and one kind of thing at one time.

To apply this it follows that when flowers are the principal objects, the trees and shrubs must be kept subordinate, and when the trees and shrubs are the chief objects, the flowers ought to be kept subordinate. In a garden there is no way of doing this but by keeping them apart, so that the one may form the foreground or principal object nearest the eye, and the other be in the distance or farthest from the eye.

The effect of dug ground near a tree is to diminish dignity of expression, and shrubs, except when small, having more or less the expression of trees, though less discordant, are so much so as to cause their exclusion from symmetrical flower gardens. In these the greatest effect is produced when the flower-beds are not mixed with shrubs, because these prevent the eye of the spectator discerning the symmetry of the figure, of which the beds form the component parts.

Where, however, the object is not symmetry, but irregularity, variety, and intricacy, then the beds of flowers and groups of shrubs, or single specimens, may be intermixed, and this sort of disposition produces the greatest beauty of which an irregular flower garden is susceptible, providing always that each group is planted with one species, or with similar species of one genus, all attaining their greatest beauty at one time; and whether flowers or foliage be their chief attraction, they should unite in forming a whole. Every bed of flowers, and group of shrubs or trees, will, therefore, if placed separately, form, of itself, a whole, and bear no relation to forming a whole or picture to be viewed by the eye from one fixed point. It very often occurs in irregularly-formed gardens that there are many straight lines which are indicative of regularity, whilst the main feature is irregularity, and this is inconsistent with a plan which, in all its great features, is irregular.

I shall not pursue the subject of the many different styles of arranging gardens further than to give the principles of them, which cannot be set aside to gratify individual taste.

The different modes of creating artificial landscapes may be distinguished and defined as four—1st, the geometrical; 2nd, the picturesque; 3rd, the gardenesque; and 4th, the natural or rural style. The geometrical style consists in laying-out and planting grounds in geometrical figures—that is, in mathematical forms or lines—regularly straight, or regularly curved. French and Dutch gardens are in this style, the majority of our own at present being simply modifications of the French and Dutch styles, especially as regards displaying masses of flowering plants in geometrical figures. For a limited space, and where a variety of trees and shrubs will not grow (as in or near our large manufacturing towns), or are not desired, no description of garden is better adapted to please the general taste than one laid out geometrically.

The picturesque style is exemplified by the trees and shrubs being planted at irregular distances, as they are in natural forests and groups, so as exhibit such a general union as would look well in a picture. In planting the trees and shrubs intended for pictorial effect, they should be scattered over the ground in the most irregular manner, both in their disposition with reference to their immediate effect as plants, and with reference to their future effect as trees and shrubs. In planting, thinning, and pruning, for picturesque effect, the beauty of individual trees and shrubs is of little, if any, consequence: because no tree or shrub in a picturesque scene should stand isolated, each being only considered as forming part of a group or mass. In planting a picturesque plantation trees should prevail in some places, in others shrubs, in some parts they should be thick, in others thin; two or three, at least a tree and a shrub, ought always to be planted together. The beauty of the isolated tree cannot be, for the beauty of a tree or shrub in the picturesque style consists in its fitness to group with other objects. A tree or shrub obtains its fitness to group with other objects not in the perfection of its form, but in that imperfection which requires another to render it complete. This style is admirably adapted for park and pleasure-ground scenery; some of the best specimens are visible at Studley, near Ripon, and at Redleaf, Kent.

The gardenesque style is characterised by the trees and shrubs being planted at irregular distances, whether in masses or groups, and so as never to crowd each other, preserving the individual form of a tree or shrub at a near view, but at a distance forming masses and groups such as might be painted, though not selected in preference to a picturesque scene by the artist. In planting, thinning, and pruning, in order to produce a gardenesque effect, each individual tree or shrub should stand at such distances from others that its beauty as a single specimen may be seen, though the whole should group when viewed at a distance. Every tree, shrub, or herbaceous plant, in the gardenesque style of laying out, derives its beauty from the perfect manner in which it is grown; and gardens arranged in this style may be considered the most beautiful of all, because the gardenesque addresses itself to the lovers of landscape scenery, the botanist, and the gardener, for it enables them to enjoy the beauty of the whole as a garden scene, and look at the trees, shrubs, and plants individually when near. Combining these two advantages, the gardenesque style stands highest in the scale of art, not the least of its merits being the instruction and pleasure derived from viewing plants grown to the highest state of perfection.

The natural, or rural style, consists in producing artificially that which appears natural when contrasted with the artificial scenery by which it is, or may be surrounded. Natural scenery, imitated according to art, is the legitimate province of landscape gardening, and includes two modes—the picturesque and the gardenesque, or nature subjected to a certain degree of cultivation. To design and execute a scene in the picturesque style would require the eye of a landscape painter, whilst the gardenesque would not only require the eye of a landscape painter, but the science of a botanist and architect, and the knowledge of a horticulturist. Every part of nature may be imitated according to art, whether it be rude or refined; but nothing that has art applied to it can ever be mistaken for a work of nature, and if imitations they ought to be avowed as such.

There is, in addition to the four styles of landscape gardening already noted, another known as *fac-simile* imitations of natural scenery; but they cannot be considered as belonging to gardening as an art of culture, because all appearance of culture is to be avoided, and they cannot be considered as belonging to gardening as an art because it is intended that the result shall not be recognised as the work of art, but mistaken for a work of nature itself. They are simply impositions. They do not come within the province of a gardener. Any person with a painter's eye, and the assistance of labourers, &c., will form them as well as a landscape gardener, if not better.

These are the principles which regulate the operations of the landscape gardener, as I have learned them from our best authorities, and in applying them to the distribution of trees and shrubs to be named hereafter, I hope to show that these principles are too often disregarded. At the same

time I shall endeavour to revive a taste for the more extensive planting of ornamental trees and shrubs in our parks and pleasure-grounds, as well as to convey some hints that may be useful to those making alterations on their estates.

G. ABBEY.

(To be continued.)

HARDY FERNS:

HOW I COLLECTED AND CULTIVATED THEM.—No. 5.

DURING my absence from home I had a fernery made for my spoil. I chose an open space of ground facing due south, so that in the summer time the Ferns would have the full light and warmth of the sun's rays. I did this, because I had noticed that the most rare and delicate Ferns I had seen chose for themselves situations of the like character. The back of the fernery abruptly descended to the edge of a pond, through which there was a running stream. On one side there was an Elm tree, which overshadowed a small part of the fernery. In making the rockery I had but one idea, and that was to provide a suitable home for the Ferns—one in which they could revel, and enjoy life as everything was created to enjoy it. The beauty of the rockery was but a secondary consideration, and, besides, at the best of times rockeries are but shams, and I never yet found a Fern that was taken in by them. If you transplant *Septentrionale* or a *Cystopteris* from a rock, so bare that the wonder is how it found sufficient food to sustain life, to similar conditions, it will die. All Ferns in cultivation require depth of soil and good drainage; so I had a large pit dug and filled with drainage, then I put in good rich earth and leaf mould. The stones or rock were disposed so as to form compact little beds about a foot square, rising tier above tier, the highest within convenient reach. When completed, the fernery looked like the terrace gardens one sees abroad, and it had a beauty peculiarly its own—a sort of tidy fitness for the purpose it was designed for.

My fernery was like my book of dried Ferns: for a year or two it presented instances of my failures rather than of my success. I planted large Ferns at the top—*Filix-mas cristata*, *Filix-femina* with black stalk, *Onoclea sensibilis*, *Lastreas*, and *Oreopteris*. As time went on I found this plan would not succeed; the drip from the large Ferns saturated the next tier of plants, and wherever the drip fell the fronds became decayed and mouldy. This I have found to be invariably the case. I also found the plants on the side of the fernery under the shadow of the Elm tree gradually grow unhealthy-looking and dwindle away. A *Polypodium cambricum*, which is now a mass of healthy fronds and brown creeping roots, for two years obstinately refused to give me more than two little stunted fronds; but directly I moved it to an open sunny space it seemed to smile in my face, and very soon new and fine fronds were sent up to thank me.

Onoclea sensibilis is a native of Virginia, but it is so hardy and free in its growth that no fernery should be without it. The fronds are large and strongly ribbed, something like the leaves of the *Rhubarb*; it sends up long bare spikes crowned with fruit, as in *Osmunda regalis*. *Onoclea sensibilis* is a very Bedouin in its wandering habits. It seldom pitches its tent for two seasons following in the same place. Give it plenty of house room this year, make it never so comfortable, and next year it will pass up far away in the midst of a bed of *Dryopteris* or *Cystopteris*. It makes itself at home anywhere, runs up hill or down hill with equal facility, and is never found where it is expected. I soon found the limits of the quiet fernery too circumscribed for the versatile habits of *Onoclea*; so I moved it to a larger sphere, where it wins general approbation, and brings up a numerous family creditably.

The common hedges of Warwickshire furnished me with *Polypodium vulgare*, which I planted in the rough crevices of the sides and back of the fernery. It grows well without care wherever there is thorough drainage. It prefers living amongst the *débris* of decayed wood; and the rich golden fructification against the bright green of the fronds makes it "a thing of beauty," and consequently "a joy for ever," in any situation.

From the lanes about Fillonghley I brought *Asplenium*

trichomanes for the lower terrace. I also found *Adiantum-nigrum* near Fillonghley. This I planted in the crevices between the blocks of rock in several places, its wavy habit making it very useful for the adornment of the rough stone. The old bridge at Stoneleigh—about which so many a tale and legend exists—furnished *Ruta-muraria* for my many vain attempts at cultivation.

In the neighbourhood of Corley Moor I found *Lastreas oreopteris*, *dilatata*, and I believe *L. spinulosa*, also the *Filix-femina* with the black stalk.

The beautiful lake at Arbury contributed some *Osmundas*, but they were not born on the soil, so I only placed them by the pondside, looking forward to the time when I should find them growing in a habitation of their own choice. *Blechnum spicant*, with its curious spikes of fertile fronds, is also common in Warwickshire. It abounds in the hedges and lanes of Exhall, Fillonghley, and many other places, and forms handsome tufts for the lower ranges of a fernery, or for spare corners where wavy green is wanted. I have found it with the ends of the fronds divided, as in the *Hart's Tongue*; but the divisions were never more than two, or at the most three, and the duration of the peculiar feature is very uncertain. I have lately bought of Mr. Ivery, at Dorking, a very beautiful variety of the *Blechnum* called *ramosum*. The end of the frond is tufted. I imagine this tuft to have been either made or increased by cultivation, as I have never found a Fern in the wild state approaching to it nearer than the cleft end I have mentioned. I sent to Mr. Ivery at the same time for a *Polystichum lonchitis*, but I received a plant which appears to be a mild form of *lonchitidioides*. The pinnules do not lap over each other; the habit of the Fern is reclinate and flabby instead of firm and erect. It is a young plant, but I fancy I have named it rightly.

The *Scolopendrium vulgare* grows plentifully in Warwickshire, but I have seldom met with any of its many varieties there. About Fillonghley it may be found with its long waving fronds measuring nearly three-quarters of a yard. When the snow hangs in rich wreaths about the hedges in the dear woodlands, and all nature seems dead and shrivelled around, hidden beneath its snow-white veil—under the friendly shelter of the hedge they have made their home, the *Scolopendriums* hold high revel in their brightest suit of green, laughing at winter's icy touch, knowing it has no power to reach the warm sap that flows beneath their thick coats.

The woodlands of Warwickshire have a charm that belongs only to themselves, and one that lingers about them through every season of the year. Life there seems to take a richer, fuller tone than elsewhere. The trees strike their roots deep down in the soil, and send up their huge limbs heavenwards, forming shadows still and deep in the summer time. The thickets are musical above with the song of birds, and beneath lies spread a fairylike carpet of a million wild flowers. There the lark sings her sweetest song, soaring heavenwards, and the nightingales fill the evening air with melody; and man, living amidst scenes like this, insensibly shapes his life and inner thoughts into unison with the scenes around him, and, as Warwickshire Will has it—

"Finds tongues in trees, books in the running brooks,
Sermons in stones, and good in everything."

The converse he holds with them is earnest and true; and whether the biting autumn wind makes him steel his body to endure, or the summer air woos him to gentler thoughts of soft indulgence, he feels in his inmost man, "This is no flattery."

The intellect of the people bears analogy to this outer life. It may have no wide range, there may be no versatility of genius, but the Warwickshire artisan brings to the foundry or the loom a mind so concentrated on the work before him as to constitute him a workman unsurpassed by any county in England. The language spoken by the people is essentially strong and truthful. They tell you their sorrows and their joys with a wonderful open-heartedness, and with a power of thought and freedom of language I have never heard equalled. Church and state are dear to a Warwickshire man in proportion as the parson "shows a good light," and the master gives a "fair wage for a fair day's work." But I have wandered away from Warwickshire lanes to Warwickshire people—a short digression—for many

a white-washed cottage nestles beneath the spreading trees in the lanes, and many a welcome from old friends has greeted me as I appeared trowel in hand.

The Warwickshire lanes abound in *Polystichum aculeatum*. It may be found side by side in its varieties of lobatum and lonchitidioides, but the latter is more rare. *Polystichum angulare* is also to be found. It may be known from aculeatum by the darker green of the fronds, by their stiffer habit of growth, and by the prickly nature of the pinnae. It is necessary to study both Ferns together to be able to decide with certainty at a glance which Fern is before you. *Ophioglossum vulgatum* grows in the meadows of Warwickshire; but the Adder's-tongue is not happy in cultivation, and it is so common that, like *Pteris aquilina* or common Bracken, few care to cultivate it. I transplant *Ophioglossum* yearly to the fernery, but only to see it yearly devoured by slugs. Eventually I discarded from the fernery nearly all of the large Ferns, planting them in good rich soil in the walks leading to the rockery. *Filix-mas*, *Filix-femina*, *Lastrea dilatata*, and the *Scolopendriums* grow well and handsomely in the shade—indeed they may be said to prefer it.

One of the handsomest foreign Ferns for out-door culture is the *Struthiopteris germanica*. Its perfect vase-like form of tender green, throwing from the centre rich-looking spikes of fruit, contrasts well with the dark robust *Filix-mas*, and forms a beautiful object for the eye to dwell upon.

Nothing but Ferns should be planted in a fernery, and great care should be taken to make good drainage at the bottom of each separate space allotted to a Fern. In planting them you must be careful that a large Fern does not overdrop a small one.

On my return from Scotland I planted *Septentrionale* in an open space in the full sunshine, with good earth and drainage, and it has flourished well. I put a specimen of each *Cystopteris* in the fernery, turning the others into a border for a flat fernery I made without rock. They grew well in this situation, increasing rapidly, so that in a couple of years I could have stocked three or four ferneries.

Dryopteris and *Phegopteris* I planted on the lower range and at the sides of the rockery; but they are troublesome in cultivation, the creeping roots finding their way into each other's houses, and becoming a confused but always beautiful tangled mass of green.—*FILIX-FEMINA*.

MY ORCHARD-HOUSE.—No. 12.

ABSENCE, on a visit to those districts of France which are most celebrated for their fruit culture, has caused an intermission of some weeks in these papers. The time, however, has been busily occupied in examining into matters which, however important to the amateur, he cannot always command the opportunity of seeing for himself. Having no object but to be useful to my brother amateurs, it shall be my future care to present to them the results of these notes on fruit culture in France. The day has, happily, long gone by when to allude to the works of any of our neighbours was viewed with suspicion and dislike. Though England is confessedly at the head of all in her horticultural triumphs, she never could have attained to this had she despised the progress made in other parts of the world, in similar pursuits. Each nation has its peculiarities and special proficiencies, and the speciality of the Englishman is that he is not above learning from even uncivilised communities. Though considered abroad as the most prejudiced of mankind we are really the only cosmopolitans. If these things really be so, they are the secret of our success in every great undertaking. And when we consider how much horticulture, as a practice, and not merely as a theory, is influenced by differences of climate, soil, and locality, it is evident that there is very much to learn still, and that every humble contributor to the general stock of knowledge has his appointed post in the work.

Looking also at the subject from another point of view, each individual effort which is made to promote free exchange of thought among neighbouring nations conduces to the growth of good feeling and peaceable dispositions. It is this thought which makes many of us rejoice in the spread of horticultural pursuits, for we know that they civilise men,

and calm angry jealousies. My brethren, the clergy of England, know this well, and they are especially unanimous in recommending a taste for these homely and quiet objects. No one feels this more than the amateur in foreign lands, for he is sure of a kindly welcome when he presents himself as an inquirer. A bond is at once established between utter strangers, and it is his own fault if the traveller fail in bringing back some new and valuable information. Having myself, from ill health, spent much time on the continent, I can testify to the truth of these things, and having derived many advantages therefrom in former times, it was very interesting to revisit these localities after a lapse of seven or eight years. Perhaps, some notes made may interest my brother amateurs.

The places visited were Angers, Chartres, this year, and Montreuil (near Paris), last year. We may take these places as types of the most advanced French cultivation. They are essentially different in their "school," as it is there termed, but present nevertheless points of resemblance. The practice at Montreuil is that which most resembles good English open-air pruning (I speak of the Peach at present); that at Angers differs somewhat from it, but both are essentially "long pruning." At Chartres, on the other hand, is a "school," about a quarter of a century old, founded and directed by M. Grin, *ainé*, which advocates the very closest pruning. That of Orleans is a development of this system, and has numerous adherents. As it is proposed to place these matters on a larger scale before the readers of this Journal, our remarks here shall be confined to Chartres.

Chartres is a town situated on the western line of rail, and not far from Paris. It is very accessible to any amateur, and well worthy of a visit. The summer climate is very favourable for fruit culture, but the winter is cold, and the soil, generally, not deep, nor abounding in rich matter. Science, therefore, has to be called in aid here as well as in England, and from what I heard from other quarters, horticulture, until M. Grin showed the way, was at a low ebb. This kindly-disposed and intelligent gentleman has a small property of his own close to the public gardens, which are beyond the promenades. It is necessary to remember this, as the French are not clever at directing *Messieurs les Anglais*. Having, however, managed to overcome these apparently insurmountable difficulties, we were amply rewarded. Indeed, few things have given me more pleasure of late than this visit.

The system advocated by M. Grin lies at the basis of all orchard-house pruning. It consists mainly of extremely close summer pruning, in the simplest and most rational way possible, and as M. Grin has devoted nearly his whole life to the study of fruit trees, and notably of the Peach, and has inaugurated a novel and a successful system, amateurs will be especially interested to hear something of it. M. Grin has confided to me the task of representing his opinions to the English public, of which he speaks highly, and as this system is, in the main, similar to that described in my own work, "Cordon Training," published in 1860, this may serve the better to describe it.

As these lines are not written for the great and learned gardeners of the nobility, but simply for amateurs and inquirers, I may here again say that all Peach pruning consists of "long pruning," and "close pruning." M. Grin is the person, undoubtedly, who has introduced this last system, and who has perfected it. So novel a revolution has caused a storm of angry contention among French cultivators. While it has been assailed and criticised by some, others have endeavoured to supersede it by introducing systems developed from a similar basis. These systems have, nevertheless, their own merits, and shall be considered in due time.

I myself, have long been convinced of the value of close pruning. Having, in 1857, heard of it from M. Leroy, of Angers, while I was there attending lectures on fruit culture, on returning home I immediately cut back very closely all my Peach trees in the open air, and have continued up to the present time to grow very fine and regular crops from trees closely spurred. Not one of the shoots on these spurs have been tied-in. They have simply been pinched-in in the summer to three leaves, and several shoots being formed on each spur, one or two were selected in the winter to bear the fruit, and those not wanted were cut back to two eyes

to obtain fresh wood. I took the idea from hearing about M. Grin's work, as I said, but had never seen his trees till this year. They therefore differ from my own, and are very beautiful specimens of Peach training. I doubt if any one has ever seen finer in every way than those in the public gardens under M. Grin's charge. They were perfect in form, either as horizontal or oblique cordons, healthy, and very fruitful.

M. Grin, however, pinches during the summer to two leaves, and obtains very fine bearing shoots quite close to the branch. This is closer pruning than my own. But the dominant idea is similar, and it will be at once evident that this "close pruning" is the very thing we require for orchard-house trees. In fact, no other can be practised, and I may be allowed to say, that in my opinion, it is far superior to the practice founded on disbudding. I hope to show this more fully at some future date. In practice orchard-house pruners have long ago dismissed "long pruning, or disbudding," as out of place. There is no room for the one, nor is the other needed, if we concentrate the action of the sap by a better and a more natural plan.

In the open air, by merely being careful to cut away fore-rights, and to tie in those shoots which are unruly (I do not, but it may also be done with much advantage), there is no reason why Peach trees should not bear as well on this plan, as they do in orchard-houses. The intelligent gardener of a friend, by merely adopting this plan after having seen my own trees, has obtained remarkable crops. In our gardens being satisfied with leaving one fine Peach for every 9 square inches, the crops every year are nearly always the same. In the house we take about double. I beg here to endorse what that "great gardener, Mr. Rivers," (as that worthy writer, "R. F.," calls him), says about not expecting continuous and heavy crops from trees in orchard-houses. They will bear fast enough if required; but no tree can stand this demand on its vitality. If we had houses in which to rest our trees—say every third year, this might be done.

Returning to the gardens at Chartres, we witnessed many fine specimens of Pear and Apple trees trained to horizontal wires in various handsome forms. Some Vines closely pinched in were also very promising. There is another idea to work out. As these matters have a direct bearing on the orchard-house question, which has now become so interesting, such remarks may prove useful.

Amateurs may be assured that the progress of these houses is watched with interest abroad. In those marvellous climates what might not a Rivers effect! Prejudice and a fear of outlay alone keeps cultivators on the Continent from producing fruit rivaling that of tropical regions. I have heard most of the objections raised by foreigners to this, but they have but little weight. Nevertheless, appliances to lessen the evil effects of abrupt atmospherical changes, are now recommended in the best works. Tiffany's scheme will soon be general, temporary glazed coverings have always been used, and what are orchard-houses but these ideas elaborated?—T. COLLINGS BRÉHAUT, *Richmond House, Guernsey*.

VINES IN POTS IN AN ORCHARD-HOUSE.

I wish Mr. W. Paul would inform your readers whether the Grapes which he so usefully tested in an orchard-house, were confined in pots, and whether the house was heated.

I have always found it difficult to grow Grapes in pots in an unheated house. The Vine has naturally long rambling roots, and however careful one may be in giving good drainage, and having a light soil, yet the Vine, unless assisted by bottom heat, is so slow in fully occupying the soil, that this becomes compressed and soddened by the necessary watering. In the open ground Vines seem comparatively indifferent to soil and drainage. I have just had to dig up some St. Peter's planted in the border of an orchard-house near a stove about four years ago. Several large roots, leaving the well-made inside border and the warmth of the stove, made direct for the outside garden ground, which was soddened by drip from the roof. The Vines ripened, however, capital crops.—S. B.

[In reply to the above, Mr. Paul has obliged us with the

following:—"The Vines were grown throughout in the temperature of a cool vinery, which was kept somewhat close while they were setting. There was no bottom heat, and not a root left the pots. The latter were full of roots when first introduced, the plants having been grown from eyes in pots last year.—Wm. PAUL, *Nurseries, Waltham Cross.*"]

GROWING CERTAIN ALPINES IN MASSES.

MR. ABBEY really makes my mouth quite water. He talks of "beds of plants" looking "lovely" and "beautiful"—of plants we unlucky amateur gardeners can hardly meet with, and still less grow when we have them. Fancy "beds" of *Linnaea borealis*, *Primula nivalis* and *cortusoides*, *Silene acaulis*, *Soldanella alpina*, *Cortusa Matthioli*, and double red *Primroses*! Will Mr. Abbey tell us how we are to have beds of such delightful little rarities, and in what county he has seen them? Pray give a place to this note if you have room, that brother amateurs may state their experience.—A. R.

["A. R." has drawn on his own imagination, and then placed the results to my account. He says I talk of "beds of plants" looking "lovely and beautiful." Now it does so happen that the words "lovely and beautiful" are not used by me at all in speaking of the beds of plants named by "A. R.;" but "fine beds" in relation to *Soldanella alpina*, "neat mass" as regards *Silene acaulis*, and "prettier bed" in respect to double red *Primroses*. It so happens, also, that the plants named can be grown successfully in our climate (and what is it we cannot grow in England?) and may be had for the purpose named either by purchase or otherwise; that purpose being the cultivation of them in quantity, so as to show them in large or small masses, in places where they would be more appreciated because more seen than they are now in some out-of-the-way corner, where they are stifled for want of fresh air, and their beauties hidden.

Now as to the how and where.

The first plant named by "A. R." is *Linnaea borealis*, a dwarf trailing alpine allied to the Honeysuckle, with pink and white fragrant bells or trumpets. He can procure this for 9d. or 1s. from several of the nurserymen who advertise in our columns; and if he like to give an order for a hundred or thousand he can have them, I have no doubt, within twelve months; or if he likes to go to one nursery they will show him "lovely and beautiful," not beds, but masses of this, and many rare though curious and charming alpine from every region of the globe, besides many other little rarities. I will suppose that "A. R." has this plant in sufficient quantity to form a bed; if not, it will not cost much to obtain sufficient plants, and he may raise the bed considerably with rock stones, and fill in the interstices with sandy loam and peat, mixed with one-half of small stones. On this place a layer of the compost about 3 inches thick, and set the plants in it, so that they may cover the surface, and if they are of the size of many that I have seen it will not take many to do so. This mode of planting may be carried out now, and it will be found a much better plan for one-half the alpine than keeping them coddled in close frames. The plants will not need anything all the winter through; and if the bed is a permanency it must not only be elevated, but the soil should be drained, and neither allowed to become very dry in summer nor baked by strong sun. Some slight protection, as a little moss, should therefore be given, and if the plant in question does not receive the sun from 10 A.M. to 3 P.M. after May it will bloom most of the summer. I did not say that *Linnaea borealis* made a "lovely or beautiful bed," because I knew it bloomed quite late enough to be employed for spring gardening; but I have seen it occasionally bloom early, and in a mass too, and on that account it had a place. For such a purpose it should be grown in shallow pots or pans well drained, in the compost already named, and be plunged in the beds during the period of bloom only, and when that is passed be placed in an east border.

Soldanella alpina, *Primula nivalis*, and *P. cortusoides* may be had for making fine beds, and *Cortusa Matthioli* also if the plants to do it are at command, and they can be had at any of the leading London or provincial nurseries for a mere

trifle. The situation should be open yet sheltered, and the plants grown in pots when not in the beds, though that is not imperatively necessary. If in pots they should only be plunged in the beds during their period of bloom, and when done blooming be removed to an east or other border where they will not receive much sun from 10 A.M. to 4 P.M. Grow them in such a border—namely, a cool border, where they may receive the morning sun before it becomes too powerful, but to be protected from it during the hotter part of the day, let the subsoil be well drained, and use a compost of sandy turfy loam and well-decayed leaf mould or peat in equal parts. Water should be given copiously until the growth is perfected, when half an inch of river sand or silver sand may be placed around the neck of the plants, but it is a good practice to do so before the dog days begin. With this sand around the necks of the plants copious waterings are not necessary, but a slight sprinkling should be given on the evenings of hot days. The plants are best in rows from 6 to 9 inches asunder, sufficient room being allowed in the row to prevent their actually touching. In this position they may remain until they show signs of growth, when they may be taken up with balls and planted in sunny but sheltered situations in the flower garden in soil prepared for them. When done blooming they may be returned to their old quarters, divided if it can be done, and there they may remain until removed to their blooming quarters again; or if the soil is very wet, they may be potted in September in wide shallow pots, using the compost named, with perfect drainage, and taking them up carefully. After potting place in a cold frame slightly protected from frost, keep comparatively dry, and guard against snails and slugs, which are very fond of the flower-buds. It is hardly necessary to say they should have all the light possible, and on all favourable occasions be thoroughly exposed to the air.

I have seen most of the above grown in this manner by the square foot, and *Soldanella alpina* by the square yard, by an old gardener when I could not even pronounce such names; and if they could be grown successfully by a man that could hardly write his name, yet who never saw failure in a little difficulty, what is to hinder our doing so now? So little were the *Soldanellas* thought of but a few years ago, that they were sold at 2d. each by the gardener in question, now deceased. I may also state that I have had fine beds of *Soldanella alpina*.

As for *Silene acaulis*, plant it either in a border in sandy peat and loam, or in a pot well drained, and afford the treatment commonly given to alpine, and it will be ready to do its work when called upon—that is, when in bloom the pots to be plunged in the places desired. Any one can have a plant of this from any nurseryman for 9d., and have a stock in a short time by dividing the roots either in autumn or spring, potting, or planting in a sunny border, and on rock-work or stones covered with a few inches of soil it grows well. I had fine masses of it.

Beds of double red Primroses any old woman can have, and I leave "A. R." to find out some neat cottage garden where the flowers are mostly known as Gillivers (Wall-flowers), Stepmother (Pansies), and Polly Aunts (Polyanthus), and he may possibly be told that double red Primroses will grow anywhere, and yet he will find them in a corner receiving the morning sun and but little during the hotter parts of the day, and that they are divided at all periods of the year just when the fit comes on her to trim up the garden, or give a slip to a friend, which is sure to be when the plants are in flower. Double red Primroses are in cottage gardens in patches large enough to fill the half of a modern flower-bed.

As an example of the care necessary to grow double red Primroses, before I was in my teens I planted a root in a corner of my father's garden close by a well, and this has continued to grow in the same place, so that my son has dug round it like me in his youthful days, and I have no doubt that another generation may do the same. It is now one immense patch, and beside it are many of the different Primroses, both single and double, that were put there by myself, and now remain, people yet stopping to look at the little garden corner over the Quick hedge by the well, and admire the beauties there exposed to view during the days of spring. In that little corner I planted numbers of common Primroses under the supposition that they would

change their colour, as I was told they would with the bees inoculating them.

Now, will "A. R." explain why when the soil of a long plantation of trees was planted with common Primroses out of the fields, a number of them on the brow of a dry hill became of a rosy purple colour in a few years, and this almost without exception, whilst those in the hollows or moister parts are every one of the usual Primrose colour? Also, how does it happen that the common sweet Violets when planted there are scentless in the following year? The soil is hazely loam on gravel.

At Wentworth House, the seat of Earl Fitzwilliam, some of the plants referred to might have been seen in sufficient quantity to form beds, being as they were plants to which Mr. Henderson, the late gardener, was very partial; and not only these, but many others both Alpines and Flices, I have noted in the counties of York, Cheshire, Lancashire, Somersetshire, Middlesex, Kent, and Surrey, in all cases cultivated in duplicate; and when they can be grown successfully as single specimens, what is to hinder their being grown in sufficient quantities to form masses?

The reason they are not now grown in quantity is, the fashion has lately been for a class of gaudy trumpery, and such plants have absorbed all the care and attention that was formerly paid to alpine and herbaceous plants, resulting in the latter being left to dwindle away, and now that there is a reaction about to commence, and a return to favour of our good old favourites, people start up and say they cannot be successfully cultivated in England. Surely we are not less intelligent, nor less clever than gardeners were thirty years back, and who had many plants that no one now a-days knows anything about. I say, if the present rage for tender summer bedding plants continues to drive out of cultivation all plants that are in the least difficult to cultivate, as they have done very many of the old ones, then the time has arrived for those who write for the public to set their faces against the monotonous features which our gardens exhibit at the present time. In doing so it is not unlikely that mistakes may be committed in noting plants not generally in cultivation as suitable for massing, which through our comparative ignorance of them may not be suitable for such a purpose. But what if we do name any that are not suitable, if only attention be directed to some such plants a liking will spring up for them, and mistakes will soon be rectified. Many of the plants named by me are suitable for forming masses in the flower garden, and none are unsuitable that I have said to form fine beds or masses, and I do not fear the issue of their trial, convinced as I am that what could be grown successfully in former times in herbaceous borders, can now be grown with the same care, and the same amount of success. Of that number will be found *Soldanella alpina*, *Silene acaulis* (though S. Schaffti, a near ally, may be thought more of), and double red Primroses. I am delighted to find that attention is being directed to these exquisite alpine and herbaceous plants, which have been too long neglected by nurserymen.—G. ABBET.]

MISMANAGEMENT OF THE ROYAL HORTICULTURAL SOCIETY.

As a very old Fellow of the Horticultural Society I fully agree with your remarks upon its present mismanagement.

I would beg leave to notice the gross inattention to the state of the plants distributed by the Society. A short time ago I received some which were awarded to me by ballot, and my gardener told me they were so infested with mealy bug and scale that he would not upon any account have ventured to place them near other plants.

I would also remark, that if there are any plants of any rarity to be distributed, they are so few that it is a hundred to one that one gets any of them; indeed, generally they consist of plants of the commonest and most useless sorts.—A FELLOW OF THE R.H.S. FOR MORE THAN THIRTY YEARS, Brighton.

THE ILLUSTRATED BOUQUET.—The eighteenth part of this beautiful serial, published by Messrs. E. G. Henderson & Son, at their Nursery in the Wellington Road, contains excellent

portraits of the hybrid varieties of the Columbine, *Aquilegia glandulosa* and *Skinneri*; *Rhododendron Countess of Hadington*; variegated *Pelargoniums Lucy Grieve* and *Rosette*; *Gomphia decora*; hybrid *Pink, Garibaldi*; and *Genista prostrata*. The illustrations are excellent and the information relative to each useful.

BIRMINGHAM FRUIT AND CHRYSANTHEMUM SHOW.

CONCURRENTLY with the great show at Bingley Hall, the Handsworth Horticultural Society, an old and well managed institution, held its annual Exhibition in the noble Town Hall. Formerly this Exhibition was held in June, but the Society most wisely decided on changing the time to the cattle show week, when the great influx of visitors afforded the prospect of its proving more remunerative.

The subjects composing the exhibition were arranged with great taste on six tables running the entire length of the Hall, whilst a brilliant bank of Chrysanthemums placed beneath the organ, and flanked on each side by a Holly tree in berry, faced the visitors on entering.

The Chrysanthemums, both large-flowering and Pompons, did great credit to the skill of the growers, particularly those of Mr. C. J. Perry, of Castle Bromwich, Messrs. T. Ryland, Milward, and Fewkes. Among the large-flowering kinds were excellent examples of *Annie Salter*, *Golden Christine*, *Prince Albert*, *Alfred Salter*, *Vesta*, *Lady Hardinge*, *Chevalier Domage*, and other well-known sorts. A very fine specimen of *Christine* was exhibited by T. Ryland, Esq., and *Golden Christine*, from Mr. Milward, was very good. For collections of nine, the first prize was taken by Mr. C. J. Perry; the second by Mr. Ryland, who also had the first prize for six, and for the best single specimen. For six, Mr. Perry was second, and for single specimens, Mr. Milward occupied a similar position.

If anything, the Pompons were still better than the large-flowering plants; and of the three kinds of *Cedo Nulli*—namely, the old, *Lilac*, and *Golden*, there were several excellent specimens contributed by Mr. Perry, Mr. Ryland, and Mr. Fewkes. Mr. Fewkes exhibited a very fine single specimen of the first-named covered with large blooms, and Mr. Perry, *Cedo Nulli*, compactly and well grown, and likewise in beautiful bloom. Of other kinds there were good examples of *Mrs. Dix*, bluish bordered with rose, *Danée*, *Andromeda*, *Salamon*, *Helène*, and *Modèle*. Mr. F. Chitty, gardener to T. Webley, Esq., sent handsome plants of *Bob*, *Miss Julia*, and *Bijou de l'Horticulture*, with which he took an extra prize offered by Mr. Perry.

Cut blooms were not equal to what we have seen at the metropolitan shows, being less in size, and some had evidently been taken from plants not grown for the purpose. Mr. George, of Stamford Hill, and Mr. Tomlin, contributed good stands, in which most of the leading varieties were represented.

Of *Primulas*, excellent plants were shown by Messrs. Chitty, Ryland, and Greaves, and the new Fern-leaved kinds by Mr. Vertigans, the latter also exhibiting a good collection of *Celosias*. A large plant of *Poinsettia pulcherrima*, from Mr. Chitty, was much admired.

The show of fruit was very good, particularly that furnished by Mr. Perry, Mr. Evans, gardener to C. Newdegate, Esq., M.P., Mr. Hargreave, and Mr. Pluck, of Jersey. A collection of twenty-four kinds from Mr. Perry, consisted of a Smooth-leaved *Cayenne*, of about 7 lbs., a good *Queen*, a *Melon*, *Barbarossa Grapes*, *Pomegranates*, magnificent *Chaumontel* and *Beurré Diel Pears* of foreign growth, besides several dishes of other kinds, *Cox's Orange Pippin*, very good; *Alfriston*, large, and some other kinds. In a collection of twelve also shown by Mr. Perry, were two bottles containing *Pears*, but these being much larger than the necks of the bottles, most of the visitors were puzzled how they could have been got in whole. Of course, they had been grown in the bottles. Large *Reinette du Canada Apples*, *Sarazin*, a good stewing *Pear*, well-ripened *Muscat* and *Black Hamburgh Grapes*, and *Webb's Prize Cob Nuts*, were also shown in this collection.

Good collections also came from Mr. Stevens, and Mr. Evans, and a large bunch of *Barbarossa Grapes* from Mr.

Craddock, gardener to Lord Willoughby de Broke, as well as good examples of *Lady Downes'*, and other *Grapes*.

In dessert *Pears*, some very fine dishes were shown by Mr. Perry, particularly of *Chaumontel*, *Easter Beurré*, *Beurré Diel*, and *Beurré Clairgeau*; *Huyshe's Victoria* was also in one of his collections. Mr. Pluck, of Jersey, had also several fine specimens, as well as Mr. Royd, and others.

In stewing *Pears*, *Uvedale's St. Germain* was shown in several collections as *Belle de Jersey*, and the others consisted of *Verulam*, an excellent stewing *Pear*, *Poux de l'Evêque*, very showy, and *Governor of Boulogne*, a yellowish green, covered more or less with reddish russet; *Catillac*, *Gilogil*, *Belhissime d'Hiver*, *Pound Pear*, *Sarazin*, &c. The principal prizes both for dessert and kitchen varieties, were taken by Messrs. Perry, Hargreave, and Pluck.

Of *Apples*, both dessert and kitchen, there was also a good display, comprising good examples of *Blenheim Pippin*, *Court Pendu-Plat*, *Cox's Orange Pippin*, and many other sorts, whilst of those for culinary purposes we noticed large fruit of the *Alfriston*, *Mère de Ménage*, *Cellini*, highly coloured, *Dumelow's Seedling*, and other well known varieties.

In a collection of *Gourds* from Mr. Perry, who was the largest and most successful exhibitor, there was a ripe *Vegetable Marrow* of 14 lbs. in weight, and among the ornamental kinds, one called *Lurline*, was very prettily marked.

Altogether the Show was creditable to the town; the setting up of the plants could hardly have been improved, and the general arrangements of Messrs. Perry and Tye, the Secretaries, were excellent.

BIRMINGHAM ROOT SHOW.

SUCH a subject may seem out of place in the horticultural columns of this Journal, but it is not our intention to trench upon the domains of the sister art of agriculture, by canvassing the merits of cattle and sheep and pigs, of ploughs and scarifiers and clod-crushers, or of thrashing-machines and winnowing-machines and turnip-cutters; but there were some exhibitions at the great Midland farmers' meeting just held, which were deserving of mention. The stand of Messrs. Sutton, of Reading, was in particular well worthy of inspection. It formed a neat centre to the end gallery of Bingley Hall, and besides a great variety of roots there was a collection of *Grasses* at the back amounting to about two hundred sorts, consisting of the beautiful *Pampas Grass*, so ornamental on lawns and by the side of water, the various *Poas*, and other ornamental and useful *Grasses*. The roots were of large size and weight, notwithstanding the dryness of the season; among them were between thirty and forty varieties of *Potatoes*, the *Student Parnip*, *Intermediate Carrots*, *Mangolds*, *White Globe Turnip*, and *Champion Swede*, the former a quick-growing early kind, the latter one which attains an enormous size, and excellent for feeding. A root of this grown by H. Crawshaw, Esq., of Newnham, Gloucestershire, weighed 25 lbs. *Giant Tankard* was another quick-growing heavy *Swede*. *Kohl Rabi* though not strictly speaking a root, is classed as such, and has been found this season to withstand the drought better than *Turnips* and *Swedes*. Some examples of the *Green* and *Purple* kinds were very large and solid, both in Messrs. Sutton's and other stands. Of course, when to be used as a garden vegetable it should be taken when very young, and in dry seasons it may be advantageously grown in case of *Turnips* failing.

Seeds of two early *Peas* were also shown in this stand. One, *Ringleader*, is stated to grow 2½ feet high, and to be very early and productive; the other, *Sutton's Longpodded Tom Thumb*, grows a foot high, and is said to be equally early and more productive than the old *Tom Thumb*, bearing pods double the length of that kind.

Messrs. F. & A. Dickson, of 106, Eastgate Street, Chester, had also a large stand, in which were specimens of forest and ornamental trees and shrubs, *Lawhead Green-top* and other large *Swedes*, *Mangolds*, some very fine *Altrincham Carrots*, *Dickson's Mousetail Turnip*, a yellow garden kind between *Orange Jelly* and *Yellow Stone*; also, *Dickson's "First and Best" Early Pea*, said to be extremely early, coming into bearing a week or ten days earlier than *Dillistone's Early Prolific*, very productive, and of fine quality.

From Messrs. James Dickson & Sons, 102, Eastgate Street,

Chester, came Piceas, Wellingtonias, Osmanthus, and other trees; Manchester Champion Red Celery, seeds, and roots; and from Mr. Perry, of Banbury, seventy-two White Spanish Onions weighing 54 lbs.; twenty-six sorts of Potatoes, Carrots, Turnips, and Parsnips. Finally, in the strictly agricultural portion of the Show there were fine, large, clean roots of Altrincham Carrots from G. Foliambe, Esq., Osberton Hall, Worksop, who also took the first prize for the best Round Potatoes with Malvern Relish, a rough-skinned red, which looked as if it would boil very mealy. The first prize for Kidney Potatoes went to Mr. Robinson, of Shaw House, Malbourne, Derbyshire, for King of Flukes.

ORCHARD-HOUSES.

Like many others interested in orchard-houses, I have watched with interest the controversy which has so long been going on in the pages of this Journal. Much has been written against the system of growing fruit trees in pots, and a good deal in its favour; but I think, as the subject is getting better understood, and the causes of failure and shortcomings are being investigated, it is pretty evident, notwithstanding the various attacks made upon the system, that fine fruit, and large quantities of it, may be grown in pots.

It would be well if those who succeed in producing good crops of fruit from pot trees were from time to time to record their successes in this Journal for the encouragement of those who fail; and if those who are not so successful were to detail their shortcomings with the mode of treatment they have been practising, then their more successful brethren might point out where mistakes had occurred, and help them to a better mode of treatment.

I am surprised, on reading the contributions against the pot system, that men who shine so brightly in horticulture should condescend to attack a system they have never tried, because their old theories and deep-rooted prejudices will not suffer them to believe that success can attend it. Many object to growing fruit trees in pots in consequence of the time and trouble required in attending to them. May I be allowed to ask, Can a house of Orchids be grown without care and attention on the part of the professional gardener or his assistants? Or is it possible for the amateur to bring to perfection a pitfall of Auriculas without time being spent in their management? And do Orchids, or Auriculas, or Roses, or even bedding plants, with all their gorgeous splendour, repay the cultivator better than fruit trees in pots? With regard to that beautiful harbinger of spring the Auricula, it, perhaps, cheers its admirers with its fragrant flowers at the most from three to four weeks in the year; whereas a Peach, for instance, affords a great amount of interest and pleasure for at least six months out of twelve. With the first genial sunshine and soft breezes the buds begin to swell, then the flowers expand; and what a lovely sight is a housefull of Peach and Nectarine trees in full bloom! what a diversity of colour! Then there is the setting of the fruit, its progress week after week, its final swelling and colouring—in short, in the whole process from the first swelling of the bloom-bud till the fruit is laid on the dessert-table, there is not a day without interest to the cultivator.

I gave an account a little later than this last year of a small orchard-house under my care, and in reviewing the previous season's labour I was enabled to speak favourably of the success which attended my efforts. In reviewing the season of 1864, and comparing my notes with last year, I find that some of our pot trees have borne more than double the quantity of fruit they did last season, and I can confirm the statements made in this Journal that the trees improve by age. All our Peach and Nectarine trees are in 18-inch pots (that is, 13 inches in diameter at the top, and 13 inches deep), and have yielded on an average about three dozen each; one Elruge Nectarine carried seven dozen of fruit, and brought them all to perfection. A first-class gardener declared he was sending fruit of the same kind to the table from wall trees under glass, and no finer. The thinning of the fruit was done at different periods, and as many as nine dozen at a time taken off. The same tree carried six dozen last year. A smaller tree of Elruge carried four dozen, and the fruit was very fine; Hunt's Tawny five dozen. Every amateur should grow this beautiful variety, though it is a little

deficient in flavour; it contrasts well with all other varieties, especially the Duchess of Oldenburg, is early and very productive. Early York, one of the best early Peaches I ever saw, and the admiration of all visitors, was thinned to two dozen and a half; it cannot be too highly commended for pot culture. Acton Scot was allowed to carry three dozen and a half; though a useful variety, and well adapted for pot culture, it will have to yield the palm to the last-named sort. Royal George, a small tree, bore two dozen; the fruit from a wall in the same house, and the same variety, was not so fine as that from the tree in a pot; other trees were in like proportion. I have weighed none of the fruit this season, and only measured two Peaches, one was 8 inches and the other 9 inches in circumference.

With regard to the ripening of fruit, a subject on which intercommunication has been invited by your Guernsey correspondent, I find on comparing my notes of the present year with those of the last that the period of ripening has advanced about ten days. Acton Scot Peach, which was ready for table last year by the 11th of August, was ready for use this year by the end of July. Early York was not ready last year until the 12th of August, this year it was so by the 3rd of August. Royal George advanced seven days, Angers Large Purple ten days; Pitmaston Orange, Duchess of Oldenburg, Hunt's Tawny, Violette Hâtive, and Elruge Nectarines have each ripened from seven to twelve days earlier than last year. The whole of our Peaches and Nectarines were more than ten days sooner this year than last. We began last year August the 10th, and had done by the 12th of September. This year we began by July the 25th, and had finished by the 2nd of September; but I attribute their early ripening to the increase of sunshine, which has prevailed this year. We generally have in this neighbourhood (Biddulph, the northern extremity of Staffordshire), a good deal of gloomy weather, with a large amount of rain, and then, to correct the temperature, we apply a little fire heat, always accompanied with plenty of air. This season we have had abundance of sunshine, therefore but little fire heat has been required. An abundance of air was always given during the progress of the ripening of the fruit, and the house was never closed until the fruit was all gathered: hence the fruit was perfect in flavour. Our trees at this season look better than they have done before, the wood is well ripened, and short-jointed, the buds are numerous and very prominent.

I consider the numerous miserable failures detailed by the opponents of the pot system to result from lack of attention or want of skill, or both; for where attention is given to minute points success is sure to be the rule. In order to arrive at success it requires constant care and constant watchfulness. The trees should never suffer during the growing season for want of water, taking care that the soil is not sodden. Occasional applications of manure water are also beneficial. The syringe should be in constant use, not a mere sprinkling of here and there a leaf, but a thorough good dose; it helps to keep the respiratory organs of the trees healthy, and the red spider has no chance to exist. I have scarcely seen a spider on our trees this season, and I attribute its absence to the free use of the syringe.—
QUINTIN READ, Biddulph.

COMPARATIVE PRODUCTIVENESS OF POTATOES.

In your Number for November 1st some results were given of experiments on the productive qualities of various sorts of Potatoes grown at Prescott, in which Paterson's Seedlings made a very conspicuous figure. A friend of mine living near me has just concluded a similar set of experiments with equal or greater care, but with different results. I forward them to you, that you may, if you please, give your readers an opportunity of comparing them.

I must premise that the quantity of land set was seven-eighths of an acre, and the crop the first from reclaimed moor land. It was broken up in the spring and summer of 1863, and the turf burnt. This spring it was half-manured with stable dung, and received, in addition, 10 cwt. of fine bones, which had been mixed in December with some of the burnt ashes, and 3 cwt. of guano, also mixed with ashes, was given at the time of planting. They were planted in rows 3 feet apart, from the 21st to the 29th of April, and

taken up in the second week in October. The result is seen in the following table. The "load" is 12 pecks—the peck 28 lbs. by weight. The land is situated in North Derbyshire, on the lower measure of the millstone grit.

Sort set.	Quantity set.		Total crop.		Return.
	load.	peck.	load.	peck.	
Early Ashleaf Kidney	0	4	1	1	3.25
Lapstone Kidney	0	8	2	8	5.33
Phases	2	12	20	24	6.6
White Rocks	1	0	9	11	10.0
Protestants	2	0	23	9	11.87
Paterson's:					
Irish Blue	1	0	3	9	3.25
Goliath Kidney	0	2	0	94	4.5
Paterson's Red	1	0	4	114	5.0
Victoria Seedling	0	12	1	04	8.0
Napoleon	0	2	1	7	9.5
	9	7	69	9	7.28

N.B.—The seed obtained from Messrs. Paterson direct.

Permit me to make a few remarks on these several results. In the first place, there is a difference between Paterson's Seedlings in the two series as compared together. In the Prescott list the Blue and Red sorts are far in advance of the Victoria and Napoleon. In the Derbyshire list it is just the reverse. In some trials printed and circulated by Messrs. Paterson themselves the result in this respect agrees with the latter.

Again, there is great discrepancy between the returns in the two series. In the Prescott experiments the Blue made a return of forty-fourfold. In the Derbyshire Napoleon (the highest) returned but nine-and-a-half-fold, whilst White Rocks and Protestants (local favourites, one originally from Ireland, and the other from Scotland) gave respectively a tenfold and twelffold return. One cannot help seeing that some error has arisen, probably from the quantity tried being inadequate to a true aggregate. Obviously, the larger the quantity set, the whole crop being carefully weighed, the less likelihood of mistakes unwarily creeping in. In this respect the Derbyshire trials have a great advantage. The Messrs. Paterson took up only a single yard of each sort for comparison. This is wholly unreliable, as a very small error multiplied by the number of yards in an acre would amount to a great sum. That some such mistake has insinuated itself into the Prescott experiments seems certain from this—that the return claimed is altogether incredible. The quantity of seed for an acre at the ordinary distance, with rows 8 feet apart, we see is 32 bushels 2 pecks. A return of forty-fourfold, as given for Paterson's Blues, would amount to 1408 bushels, omitting the 2 pecks over, or more than 50 tons; in value more than £204 per acre at 3s. the bushel.

No doubt different Potatoes do better on different soils; but the only results from experiments of this kind that could be positively relied upon would require not only equal weights, but equal numbers of sets, and the larger the area the nearer would be the approximation to absolute truth.—**AGRICOLA.**

[We have the address of the clergyman who favours us with this communication. It is from such comparative experiments that truth is obtained, and it was with that object the Prescott experiments were reported to us. "AGRICOLA" is quite right in his remark that experiments on a large scale are much less liable to error than experiments on a small scale. Soil has much influence over the productiveness of the Potato, but season and climate much more. It would be very satisfactory to have similar experiments instituted for two or three following years. The past summer was very hot and dry; would the same varieties give the same results if the summer were cold and wet? It is very desirable to know which variety will best endure such a season.—Eds.]

SOMERFORD PARK.

THE RESIDENCE OF SIR CHARLES SHAKERLEY, BART.

THIS lovely place lies about four miles to the west of Congleton, and is about five miles from the railway station. The country from Congleton to Somerford is uninteresting, and somewhat deficient in undulating scenery; but as I

passed along the road, I could not but admire the splendid fields of golden corn on either hand. Some had been already cut and carried, while the remainder was ready to succumb to the sickle.

We entered the park from the road leading from Congleton to Knutsford; it covers an area of about six hundred acres, and contains some noble specimens of timber trees, rearing their stately heads. Extending my rambles across the park in the direction of the gardens, I noticed to the left a beautiful lake, its extent judiciously concealed by bends and curves, and the banks planted with evergreen and deciduous trees. To the right lay the church (sustained at the worthy baronet's expense), encircled with masses of luxuriant green foliage. Arriving at the frame ground, the first things that presented themselves were some very old-fashioned houses. An old greenhouse was filled chiefly with Fuchsias, Ferns, and Lycopods, the latter two being great favourites with the lady of the house. Against the same wall was a range of Peach-houses and vineries, built sixty or seventy years ago, in the same style of architecture as our forefathers built hothouses. Notwithstanding the age of the Vines there were some good bunches of Grapes, the berries extremely well coloured, perhaps owing to the free ventilation between the numerous small-squares of glass. That there had been a good crop of Peaches, and fine fruit, was evident from the remnant left.

Leaving now the frame ground, and entering the kitchen garden, properly so-called, the first object of interest was two newly-erected vineries, put up on the newest and most approved principles. The first house I entered was entirely devoted to Muscats; the Vines, only planted last spring, are at the back and front, and such canes for one year's growth I never saw. The second house had been planted two years longer, the first year the Vines were cut down in the usual way, last year they were allowed to carry two or three bunches, and this year they are bearing eight bunches each. It was the Grapes and flower garden that I more particularly went to see. I had heard a good deal of the latter, and my expectations were more than realised. The front of this house was planted chiefly with Black Hamburgh Vines, with one Grizzly Frontignan, and one Muscat Hamburgh. On the back wall were White Muscats, Buckland Sweetwater, Chasselas Musqué, and Trentham Black, and they were fruited nearly down to the ground. The Black Hamburghs were extremely fine, and in their culture evidently displayed a great amount of skill on the part of Mr. Silcock, the intelligent head gardener. Many of the bunches would weigh from 3 lbs. to 4 lbs. each. The berries were well coloured, a very important point in Grape culture, and I have seen but few, if any, to surpass them, either at Keele Hall, or Garston, two of the greatest Grape-growing places in the kingdom.

We have had many long treatises written on the formation of Vine-borders, so I will just give, in a few words, the composition of those here, which were inside the houses. No doubt when your readers hear of great success attending the culture of the Vine, or any other plant, they like to know the nature of the material in which the plant thrives so well. After the usual drainage, the borders consist of rich turfy loam, pared from the surface of an old pasture about 2½ inches thick, and allowed to remain in a compact mass previous to use, intermixed with ground bones, and a tolerable quantity of lime rubbish.

On leaving these houses I proceeded round the kitchen garden, and I noticed that the south wall not occupied by the vineries was covered with Peach and Nectarine trees in full bearing, and carrying a heavy crop. These, as well as all the other wall trees, have only been planted about six years, and yet nearly every inch of the walls was covered with fine healthy timber. The wall with a westerly aspect was planted with Peach and Apricot trees, the latter having borne a nice crop of fruit. On the east wall I noticed some fine Plums of the more choice varieties, while the north wall was furnished with Morello Cherries, and a most magnificent crop, such as hardly could be surpassed.

In the kitchen garden I also observed many cone-shaped Apple trees, near the edges of the garden walks, 6 or 8 feet high, and loaded with beautiful fruit. One small tree of Lord Suffield 3 or 4 feet high arrested my attention, I counted fifteen large Apples upon it, and took the dimen-

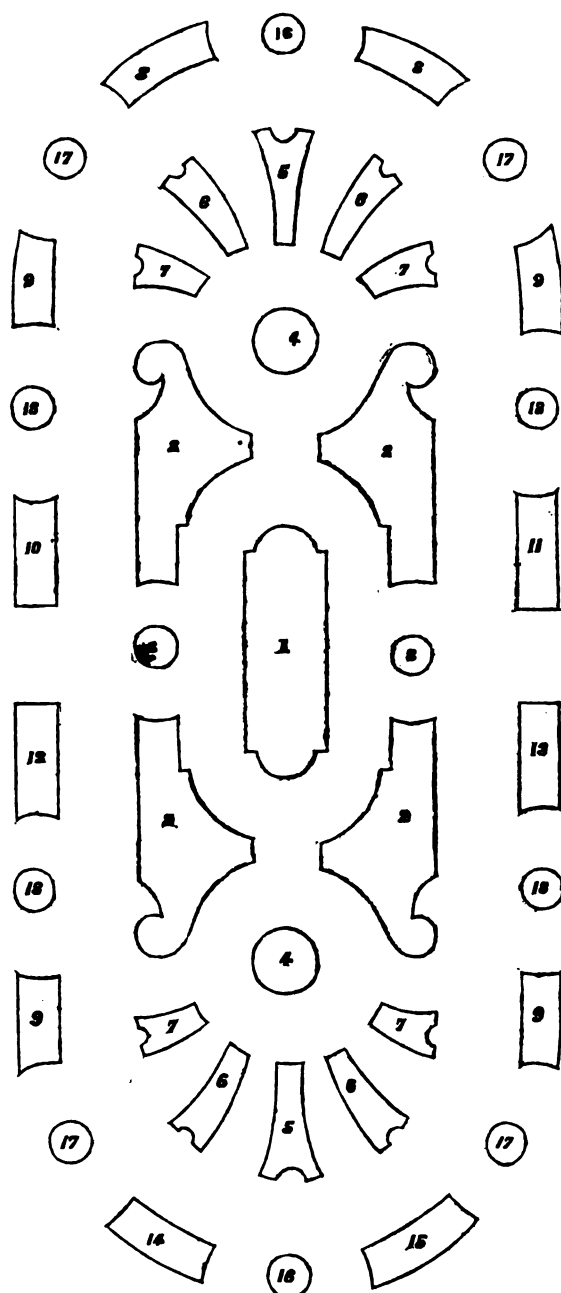
sions of one which was nearly a foot in circumference.

The Strawberries, I was told, had done remarkably well, Oscar having succeeded about the best. The plants were cleared of all runners and useless or dead leaves; but the system of mercilessly cutting off all the leaves was repudiated here.

The south and west walls on the outside of the kitchen garden were covered with choice Pears, and I particularly noticed such sorts as St. Germain, Winter Crasanne, Belmont, Brown Beurré, Marie Louise, Beurré Rance, Ne Plus Meuris, Beurré Diel, Beurré d'Arenberg, and many others, all growing, if I may be allowed to use the expression, under the burden of heavy crops of fruit.

Leaving the kitchen garden and fruit department we turned to the left, and passed along a narrow walk screened from the sun's rays by lofty forest trees, with dwarf Laurels planted underneath, and from this walk we obtain pleasing views of the surrounding scenery. Down in the valley below the grazing cattle formed a pleasing feature in the landscape whilst wandering on the rich pasture land by the side of the river Dane, which meanders through the rich pastures of Cheshire, so noted for large cheeses. To the right may be seen in the distance a high hill called the "Cloud," which forms the extremity of a vast assemblage of rocky ridges spread over the northern portions of Stafford and Derby; it runs from north to south, and terminates in full view of the town of Congleton in a fine dome-shaped mountain, more than 1100 feet above the level of the sea.

A little to the right we come to an old-fashioned conservatory kept gay with some flowering plants. Some standard Fuchsias, 8 feet high and nearly as much through, looked well; also the fine old Orange trees, 9 or 10 feet high, which have occupied the same place for forty-five years. In front of this conservatory is a small flower garden, extremely cheerful and gay, and in which the plants were anything but the miserable objects some writers would make us believe bedding plants generally are this season. I only took down the way in which one of these beds was planted, and that was the centre bed, about 10 feet square. The outer edge was Cloth of Gold Geranium, next to this were several rows of Rose Queen Geranium, with the centre Stella Nosegay; and I



Scale 24 feet to the inch.
FLOWER GARDEN AT SOMERFORD PARK.

- | | |
|---|--|
| 1st Bed. Centre row <i>Perilla nankinensis</i> . | 10th Bed. <i>Geranium</i> Rose Queen, edged with <i>Lobelia Paxtoniana</i> . |
| 2nd. <i>Calceolaria Aurea floribunda</i> . | 11th Bed. <i>Geranium</i> Trantham Rose, edged with <i>Miss Nightingale</i> . |
| 3rd. <i>Tropaeolum elegans</i> . | 12th Bed. <i>Verbena</i> Bonny Dundee, edged with <i>Lobelia Paxtoniana</i> . |
| 4th. <i>Lobelia speciosa</i> . | 13th Bed. <i>Geranium</i> Carmine Nosegay, edged with <i>Heliotrope Miss Nightingale</i> . |
| 5th. <i>Cerastium tomentosum</i> ; an edging all round. | 14th Bed. <i>Geranium</i> Stella Nosegay, edged with <i>Lady Plymouth</i> . |
| 2nd Bed. <i>Geranium</i> Bijou, edged with <i>Purple King Verbena</i> . | 15th Bed. <i>Geranium</i> Punch, edged with <i>Mangles' Variegated</i> . |
| 3rd Bed. Cloth of Gold <i>Geranium</i> . | 16th Bed. <i>Gazania splendens</i> , with <i>Humea elegans</i> in centre. |
| 4th Bed. Centre <i>Perilla</i> and <i>Centaurea argentea</i> , edged with <i>Tropaeolum Eclipse</i> . | 17th Bed. <i>Geranium</i> Alma, edged with <i>Verbena Ariosto</i> . |
| 5th Bed. <i>Geranium</i> Golden Chain. | 18th Bed. <i>Mignonette</i> , <i>Humea elegans</i> in centre. |
| 6th Bed. <i>Lobelia speciosa</i> . | |
| 7th Bed. <i>Geranium</i> Stella Nosegay. | |
| 8th Bed. <i>Verbena</i> Firefly, edged with <i>Cerastium</i> . | |
| 9th Bed. <i>Calceolaria Aurea floribunda</i> , edged with <i>Perilla</i> . | |

have seen nothing in my rambles this season to equal *Stella* for beauty. This garden is kept gay in the spring, on the Cliveden system of spring flower gardening, with such things as Tulips, Wallflowers, Anemones, Forget-me-not, *Lasthenia californica*, *Limnantes Douglasii*, &c.

From this lovely spot we wend our way along the pleasure ground by the north-east side of the mansion to the front, and here an unrivalled blaze of floral beauty at once bursts upon the view. In front of the mansion is a broad terrace-walk, and in front of that a sunk-panelled flower garden. This is but the second year of its being planted, it having only recently been laid out by Mr. Silcock, and its ornamental appendages are not yet completed. It looked extremely well. All the beds were full to overflowing, and when the sun's rays fell upon them the effect was charming.

Through the kindness of Mr. Silcock, I here give a plan of one half of the flower garden, the other half exactly corresponds with the one engraved. Our young friends will do well to draw it out on paper, and paint the beds the colour of the flowers. Down the centre is a broad gravel walk 18 feet wide. It occurred to me that the walk would be better away, and if water could be supplied, an ornamental fountain in the centre would add greatly to the effect. With regard to the planting of the beds, and the arrangement of the colours, there was a preponderance of *Perilla nankinensis*, *Purple King Verbena*, and *Lobelia speciosa*; but Mr. Silcock told me that many of the beds were destroyed by the late spring frosts causing vacancies, and there not being a sufficient supply of the same kinds of plants, the original design could not be adhered to.

In close proximity to the flower garden were some fine old Oaks, "kings of the wood," having evidently maintained their position for many years past. One I noticed of tremendous girth, three of us joined hands together and were unable to span round it within about three feet.

It would be a want of courtesy were I to close these notes without acknowledging Mr. Silcock's exceeding kindness, the profit I received, as well as the gratification, I felt on finding every part of this domain in such excellent keeping. —QUINTIN READ, *Biddulph*.

HOT-WATER PIPES PASSING THROUGH THE OPEN GROUND.

I HAVE had about 20 yards of two-inch pipes, flow and return, in the open ground, to heat a vinery at some distance from the boiler. I have placed bricks below the pipes and also along the sides, and intend covering them over with semicircular tiles cemented on the brick to keep out wet, the whole to be covered over with puddle. Please say if you consider this fixture sufficient, and if it would be desirable to fill the chamber in which the pipes are with sawdust, so as to retain the heat for a longer time.—SAWDUST.

[We think your precautions sufficient, and if you left a small air opening in the culvert next the boiler, and the other end next the vinery entirely open, we would do nothing more, as the heat and a constant charge of air would be carried from the culvert into the vinery. If there are reasons why the end should not be left open into the vinery, then you had better stuff the pipes round with sawdust.]

GRAPE-GROWING AT COOMBE ABBEY.

COOMBE Abbey is a new name in the lists of English gardens of note. A short time ago a public notice of this fine place appeared, in which some fine Barbarossa Grapes were spoken of. Having recently seen these Grapes, I can state that the notice referred to indicated but faintly the magnificent appearance of the Grapes, and the style of work that has grown up at Coombe Abbey within a few years.

A week ago I found ripe Strawberries being gathered, and was told that they were to be had in succession onwards. After seeing the ways and means to secure such a desideratum, the first doubts were considerably modified.

Had I seen nothing but the Barbarossa Grapes, it would have been quite satisfactory as to Mr. Miller's standing as a Grape-grower. In the same house are samples of that splendid Grape, the Lady Downes', equally fine with the Grapes I wish to speak of.

The Barbarossa at Coombe Abbey is growing on its own roots; the Vine has been planted about two and a half years. On one Vine are six bunches, the least not less than 5 lbs. Several of the bunches will weigh close upon 8 lbs. each, and these bunches are equal in shape and colour to the best Black Hamburgs. When seen in this style the Barbarossa has a very noble appearance. Lately, the Barbarossa has been spoken of as superior when grafted on the Hamburgh. I have seen it in this way and it looks well, but appears to me something different from the Barbarossa. The leaves, when so grafted, are decidedly those of the Hamburgh, shed early, and tell against the most valuable quality of Barbarossa, that of hanging long.

It is most gratifying to gardeners to see a young man of such enterprise as Mr. Miller, at the head of one of the most complete gardens in England.—CHAS. McDONALD.

WORK FOR THE WEEK.

KITCHEN GARDEN.

SHOULD frost prevail, every advantage must be taken of it to wheel manures and composts on to the various quarters requiring it, and if it cannot be trenched in at once, let it be laid in heaps at convenient distances and covered with soil. Ridged ground may be occasionally forked over and knocked about, to expose fresh surfaces to the action of the atmosphere. Collect as many leaves together as possible, they are invaluable for mixing with green manures for fermenting purposes, as they not only correct the rank and violent fermentation, but preserve a more steady and uniform heat for a greater length of time. Those of the Oak are much to be preferred, as they resist decomposition the longest; Beech comes next; after these there is little choice. *Cauliflowers*, surface-stirring among young growing crops of these and of Cabbage, Lettuce, &c., must be as diligently followed up now as in the summer, when vegetation is more rapid; indeed, there is no season when these important operations can be neglected with impunity. Frequent pulverisation of the soil acts as a great check to the penetration of frost in winter, and to the evaporation of

moisture in the summer. One indispensable condition is, that the ground must never be trodden on after the operation is completed. *Celery*, if very severe frost come on protect this, Parsley, and late Endive for spring use. Ground cropped in the preceding season with Carrots, Parsnips, or Potatoes, and found, as is frequently the case at this time, infested with grubs, should have a good dressing of soot or lime dug in, or if they cannot be had, the soil should be turned up in ridges for the winter.

FLOWER GARDEN.

At this season of the year a little labour will secure a valuable supply of material for enriching the flower-beds and borders. Leaves are everywhere at hand, they should be sedulously collected and stacked in some out-of-the-way place, with a mixture of road sand and light soil, rotten sticks, and decaying vegetable matter, and left to ferment; in a season or two the most valuable compost will be the result, especially suitable for many of the shrubs and plants which decorate our gardens, whose original position was probably near some primeval forest, the ever-accumulating leaves of which would naturally give a character to the surrounding soil, and encourage the growth of *Rhododendrons*, *Azaleas*, *Magnolias*, &c. Examine pillar and trellis Roses, and if the weather is favourable see if the soil wants renewing, or the kinds changing. If choice sorts, large holes capable of containing three or four barrowloads of well-prepared soil should be made. Turfy loam of good quality is the chief thing, to this add a portion of rich rotten dung, and if at hand a little sandy peat or leaf mould. Have everything in the shape of protection ready for covering half-hardy plants on the approach of frost.

FRUIT GARDEN.

If any planting of young trees, or removing of others, has still to be done, attend to it at once. Let Gooseberry and Currant bushes be pruned on frosty mornings, or when the ground is in a dry state, so that it will bear treading upon without injury. After pruning give the ground among the Gooseberry and Currant trees a good dressing of lime or soot, which is useful as a preventive of their great enemy, the caterpillar. As Cherries, Gooseberries, and Currants have often their buds destroyed in severe weather by birds, take the opportunity of a damp day and well dust the shoots with a mixture of dry soot and quicklime using sufficient to cover the buds. Two or three dustings during the winter prevent in a great measure the ravages of these pests. Where the Raspberry grub is troublesome give a good dressing of gas lime before digging the ground, taking care to apply it regularly about the base of the plants.

STOVE.

A cautious application of fire heat must still be observed here. Keep the temperature rather low than otherwise for fear of exciting a premature growth. Cleanliness and a judicious use of the watering-pot should be strictly attended to. A small portion of air may be advantageously admitted on fine days, and will greatly assist in purifying the atmosphere of the house. Many things will be sinking into repose here, and from such water must be entirely withheld.

GREENHOUSE AND CONSERVATORY.

Remove *Chrysanthemums* as the flowers fade to make room for other things. The earliest started *Camellias* and *Epacris* will be advancing into bloom, as will the useful *Erica hymalis* and *Wilmoreaana*. A little fire heat will be indispensable here during cold damp foggy weather, in order to allow of admitting a little fresh air to carry off superfluous moisture without lowering the temperature too much; but this should be applied during the day, and all watering should be done in the morning, so that the atmosphere may be moderately dry before night, as a damp stagnant atmosphere is especially injurious to flowers. The winter flowers will now be making a splendid display in the conservatory, at least where they have received special attention through the summer to this end. The *Euphorbia jacquiniiflora* is one of the foremost of these beauties when properly cultivated. *Poinsettia* is a bold and dashing conservatory plant, and indispensable at this time of the year. *Gesnera zebrina*, under high cultivation, is a most beautiful winter flower. Some of the genus *Cytisus* are very showy and fragrant, and as yellow flowers are somewhat scarce they become very useful.

FORCING-PIT.

This is a good time to introduce the following plants here, provided they have received the necessary treatment during the summer:—Rhododendrons, Anemones, Persian Lilacs, Sweet Briars, Moss and other Roses, Ledums, Kal-mias, Daphnes, Anne Boleyn Pinks, Dutch bulbs. Unless, however, they are in proper trim it will be labour in vain, and no mode of forcing or form of pit can compensate for this. The great secret of success, if the heat is wholly derived from fermenting materials, is to keep down accumulating damp and mouldiness by an almost constant ventilation. Those who are fortunate enough to possess pits heated by hot water will, of course, pursue a somewhat different course.

PITS AND FRAMES.

Look well to those structures containing stores for next summer, and have sufficient protecting materials always in readiness with which to cover them whenever the weather is unfavourable.—W. KEANE.

DOINGS OF THE LAST WEEK.

In all departments the work was chiefly a repetition of previous weeks. Looking after vegetables, protecting Strawberry-pots from excessive rains and slight frosts, clearing off faded leaves from the vinerias, &c.; potting Cinerarias and Primulas, and finding suitable positions for them.

The chief labour has been cleaning up, collecting tree leaves, sweeping and rolling lawn and walks, as most of the leaves are now fallen. This is a constant work, where neatness is an object, and fallen and drifting leaves always conjure up feelings of melancholy. Rough-pruned some strong Roses, &c., at the same time. All such work that was done before the late heavy rains on Wednesday, now looks nice, from the thorough washing the lawn and walks received.

Such washing of the latter, especially if salt is used in the summer for killing weeds, will help to make the walks all nice before the winter. We always feel reluctance to use salt for cleaning after April and May, as with fine gravel, if used later, there will be a tendency to softness in winter, which is disagreeable, especially in damp weather. When used early in spring, it will generally be completely washed out of the gravel before winter. When walks are too rough to be walked on comfortably, we mean from the gravel being large, and of an unbinding character, salt applied to kill weeds, will also ere long make the gravel fine enough. For fine gravel, even on this account, salt should always be used sparingly, as it will break the pebbles gradually down to dust. This wearing effect of salt should not be forgotten, and especially should it be remembered when used near the walls of a stone building. We have known cases where the salt after getting into the ground had risen through the stones, and moistened and mouldered them to a height of several feet. Salt, even for such purposes of cleaning, should therefore be used sparingly and with judgment. We once cleaned very easily some dirty, greasy, green pavement with salt and soda water, but it was a long time before we could get the salt out, so as to prevent it eating away the softer stones, and leaving a whitish dust on the surface, which told too clearly to the initiated the means that had been used for cleaning.

We rolled hard all the walks we could get at, as if there is the smallest fall to the sides—say 1½ inch from the centre to the sides of a nine-foot walk, a firm, smooth surface now, will send the rains off instead of allowing them to penetrate the walk; and when this is done, the walk being comparatively dry will be little influenced by frost, as it is unpleasant to go on walks when raised by such frosts, which they will certainly be if they have previously been wet. The firm rolling of walks early in winter is also an advantage in all shady places where moss and green is apt to accumulate in winter, as when a sharp frost comes the surface of the firm walk can be well scrubbed with an old hard broom, and almost the whole of the green thoroughly removed—a much easier and better process than digging and turning, which always leaves a walk uncomfortable for a time.

Notwithstanding the trouble of collecting and keeping

tree leaves, they are, perhaps, the most useful things to be found for a garden. With scarcely any trouble in the way of preparation, they furnish the means of themselves for slight hotbeds of all kinds. If collected damp, all that is necessary is to throw them into a heap, so that the somewhat violent heat may scatter slugs and kill a good many seed-weeds. When a stronger heat is required, as for Cucumbers, this will be secured by a mixture of horse-dung, and then a casing of these sweet leaves will keep down all noxious steam. When collected when they are damp and wet it matters little where you put them, as unless in very small quantities they will be sure to heat; but if they can be procured dry it would be a good thing to store them in an open shed that is sparred all round but with a substantial roof to let off the wet. Here trodden rather firmly they will keep a long time and heat but little, and when wanted for use will always yield heat when sprinkled with water. We have known them thus kept as carefully as if they were Hops, and have seen them good even when two years gathered. It would be of little use thus housing them when collected wet as they would be sure to heat.

These leaves when decomposed may be used so continuously for manure until the ground, whether a flower-bed or a Cabbage-bed, may long for a change of enriching material; but this may always be helped by a slight application of lime, and though such leaf manure will not yield such heavy crops as a good dressing of farmyard manure, the produce will generally be much sweeter. Even Celery, a rampant feeder, we always think sweeter and crisper when grown chiefly in decomposed leaves.—R. F.

COVENT GARDEN MARKET.—DECEMBER 3.

We have nothing fresh to report. Prices remain unchanged.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples.....	3	0	0	0	Melons.....	each	1	6	to 4 0
Apricots.....	dos.	0	0	0	Mulberries....	punnet	0	0	0 0
Cherries.....	lb.	0	0	0	Nectarines.....	doz.	0	0	0 0
Chestnuts.....	bush.	14	0	20	Oranges.....	100	5	0	10 0
Currants, Red...&	sieve	0	0	0	Peaches.....	doz.	0	0	0 0
Black.....	do.	0	0	0	Pears (Kitchen)...	bush.	5	0	10 0
Figs.....	doz.	0	0	0	dessert.....	doz.	1	0	3 0
Filberts & Nuts 100	lb.	60	0	80	Pine Apples.....	lb.	5	0	8 0
Cobs.....	do.	70	0	80	Plums.....	3	0	0	0 0
Gooseberries...&	sieve	0	0	0	Pomegranates....	each	0	4	0 0
Grapes, Hamburgh	lb.	1	6	5	Quinces.....	3	0	0	4 0
Muscats.....	3	0	7	0	Raspberries.....	lb.	0	0	0 0
Lemons.....	100	6	0	10 0	Walnuts.....	bush.	14	0	20 0

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes	each	0	0	to 0 0	Horseradish ...	bundle	2	6	to 3 0
Asparagus	bundle	0	0	0 0	Leeks.....	bunch	0	2	0 0
Beans Broad.....	3	0	0	0	Lettuce.....	score	2	0	4 0
Kidney.....	100	2	0	3 0	Mushrooms.....	pottle	1	6	2 0
Beet, Red.....	doz.	1	0	3 0	Must. & Cress, punnet	0	2	0	0 0
Broccoli.....	bundle	1	0	3 0	Onions.....	bushel	4	0	5 0
Brussels Sprouts	3	6	3	6	pickling.....	quart	0	6	0 0
Cabbage.....	doz.	1	6	3 0	Parsley.....	doz. bunches	4	0	6 0
Capicums.....	100	0	0	0 0	Parasips.....	doz.	0	9	1 0
Carrots.....	bunch	0	5	0 8	Peas.....	quart	0	0	0 0
Cauliflower.....	doz.	4	0	6 0	Potatoes.....	bushel	2	6	4 0
Celery.....	bundle	1	0	2 0	Radishes doz. bunches	0	9	1	0 0
Cucumbers.....	each	0	9	1 6	Savoy.....	doz.	1	0	2 6
pickling.....	doz.	2	6	3 0	Sea-kale.....	basket	3	6	0 0
Endive.....	score	0	3	0 0	Spinach.....	sieve	3	0	0 0
Fennel.....	bunch	0	3	0 0	Tomatoes.....	3	0	0	0 0
Garlic and Shallots, lb.	0	3	0	0	Turnips.....	bunch	0	3	0 0
Herbs.....	bunch	0	3	0 0	Vegetables mixed doz.	0	0	0	0 0

TO CORRESPONDENTS.

•• We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to The Editors of the Journal of Horticulture, &c., 171, Fleet Street, London, E.C.

BUDGING ROSES ON THE BLACKBERRY (*An Inquirer*).—The Blackberry and the Rose are of the same natural order, but we never heard of their being united by budding, nor do we see any probable advantage that would arise from the Blackberry stock.

NETOTARINES NOT RIPENING (*Hampshire Hills*).—Very rarely do Netotarines ripen well on an open wall however good the aspect. If you covered them with glass lights like those of a Cucumber-frame, the fruit would ripen and well repay you.

PLANTING PEACHES IN A GREENHOUSE (J. M.).—Your mode of planting will depend on what you want to use the house for. If chiefly for Peaches and preserving plants under them in winter, then by all means plant the trees in front of the bed, and train them right over all the roof on a trellis 16 inches from the glass. If you wish the bed to be used for placing plants in at all times, whether fruiting plants or flowering ones, then by all means plant against the back of the bed and train to a perpendicular trellis along the pillars. You will have abundance of light for this trellis, provided no plants high enough to obstruct light are placed before it. The first plan would be the best for a regular Peach-house, the second would be best for giving light to a great variety of things in the same house. In either case the bed may be used for other purposes before the trees fill their allotted space. If the trees are planted at back, secure good drainage, or there may be too much soil there. Two feet will be ample, or even 22 inches.

PLANTING WATSONIAS, IXIAS, SPANAXIS, TRITOMAS, AND GLADIOLUS (J. F.).—The most suitable time to plant the first four is October, and for the Gladioli the latter part of March or beginning of April if the soil be light and well drained; but if cold and heavy, the end of April or beginning of May is a more fitting time. Directions for planting them will be found in our Number for October 25th, page 328, and we can add nothing to the information there given, save that the distance apart should be 4 inches, and that Watsonias require the treatment of Ixias. The ground in which Gladioli are to be planted should be dug deeply, and forked over once or twice during the winter if it be at all heavy, giving a liberal dressing of manure or leaf mould in the autumn, so that it may be thoroughly decomposed and incorporated with the soil by spring. Plant 9 inches apart, and cover with 3 or 4 inches of soil. These remarks relate to the Gandavensis section, and if yours be of the Rameus section they should be planted in February or March.

RHODODENDRON STOCKS (S. C.).—The Rhododendron ponticum is a good stock, and the best we know. Any time will do to pot Rhododendrons, as they take up with such fine balls, but if these is one time better than another to pot them at it is March. If you pot them now, or any time in mild weather from now until spring, they will be suitable for grafting at that season, but they are better established a year in pots, though this is not imperatively necessary if only the stocks are sufficiently strong. The Rhododendron is usually raised from layers, and we are not aware that it can be done successfully by cuttings. The Asalea cuttings two months struck would do better in a temperature of from 45° to 50°, than in one of 60°, which we presume is the minimum.

CAMELLIAS IN COCOA-NUT FRISK REFUSE (L. S. M.).—The present state of the plants is probably due to your employing the dust in a fresh state, when it is much too open to be used for potting hardwooded plants; but if it was pressed firm and mixed with turfy loam we do not see in what way it could bring on the consequences named. The plants were most probably neglected, as regards water, when placed on the top shelf of a stage in the greenhouse, and were not shaded from the sun. This is more likely to be the cause than potting in the refuse, for with us the Camellias have done well in it, but we reduced it to black or very dark mould. The circumstance of the leaves being blotched confirms the above conclusions, as they are usually so when the young growths are made under an unshaded roof. The only remedy that we know of, will be to place the plants in a mild hotbed next April—say in one of tanner's bark in a vinery, and to keep them there until new growths are made and the buds set, when they may be removed to a cooler and lighter structure. Camellias prefer a slight shade when making their growth, and a slight increase of heat and moisture. Tobacco smoke will assuredly kill thrips if you fill the house so that a plant cannot be seen, taking care to do so on calm evenings when the plants are dry, and employing the strongest shag tobacco. Smoke twice on alternate evenings, and afterwards whenever the insect appears. You will do little towards exterminating the pest if the plants are not kept cool, well aired, and supplied with moisture such as is needed. A sprinkling of water through a fine syringe on bright mornings is conducive to the health of *Mineraria* and herbaceous *Calceolarias*.

SOIL FOR RHODODENDRONS (E. N. E.).—As your soil is very light and dry it will not grow Rhododendrons; but if it were dug out in the places where you propose planting to a depth of 1 foot 6 inches, and the holes filled with good turfy peat soil, we have no doubt that you might grow Rhododendrons well. In putting the peat in the place of the soil taken out it should be chopped with a spade, so that it may not lie too lightly and open. In choosing the peat select the brown turfy sort; and if Bilberries grow in it prefer that to such as is found on the higher parts where the common Heath grows very dwarf and stunted.

SAWED FOR ASPARAGUS-BEDS (R. B.).—It is an excellent manure for Asparagus-beds. We applied a mulching of it quite fresh, when the stems of the plants were cut away in autumn, and left this covering on the surface until March. We then removed it, and having plenty of decayed sawdew we gave the beds a good coat of this, and just pointed it in with a fork.

WINDOW GARDENING FOR THE MARY (T. S.).—We cannot send a leaf without destroying a copy to do so.

THRIPS ON CAMELLIA LEAVES (Irish Lady).—There were traces of thrips having been on all the leaves sent except one. Thrips very rarely attack Camellias, this being only the second instance in our experience. Fill the house some calm evening with tobacco smoke so densely that a plant cannot be seen, and repeat the dose the next night but one. Sprinkle the plants on the underside of the leaves the day after each fumigation, taking care to have the foliage dry before fumigating again. It may be necessary to repeat the fumigation, for though tobacco smoke will destroy the insect it will not kill its eggs. Repeat the fumigation, therefore, if the pest appears. The atmosphere must have been kept as dry as that of the deserts of Arabia to render the Camellia leaves a suitable prey for thrips. Keep the air more moist, otherwise the leaves will drop, and the flower-buds fall like a shower of hail.

STOVE BOILERS (A Constant Subscriber).—We have reason to know, that the boiler named soon burns through, and that all the so-called boilers without setting do the same. There is little if any difference in them, and they all do their work pretty well, subject to the drawback of the outer casing speedily burning through. We cannot depart from our rule of not recommending one dealer in preference to another, and we have no doubt the one named will answer as well as others. If you will refer to the Number of this Journal for January 19th, page 58, you will find a notice of a boiler that would suit you. For further particulars our advertising columns will meet your wishes.

PROPAGATING VARIETATED EIDER (H. F.).—You may take cuttings with three joints from the young growths, selecting those which are moderately strong, and cutting them transversely immediately below the lowest joint, and slantingly above the uppermost. Insert two joints in the soil, or if the cuttings have five joints three, leaving one in the former case, and in the latter case two out of the soil; the majority will root. Now is a good time to put them in. They grow best, however, from layers. A moderately light soil is best, and the cuttings may be put in in rows 1 foot apart, and from 3 to 6 inches asunder in the rows.

INLIES OF THE VALLEY NOT BLOOMING (H. A.).—You will benefit them much if you thin out one-half the plants or roots, so that they can obtain more air, planting those removed in soil well manured, and the plants not too close. They are best planted in rows 1 foot apart, and just covered with soil, giving a top-dressing of well-rotted manure or leaf mould an inch thick. There is no plant so much admired in its season as the Lily of the Valley, and yet it is the worst tended of all plants. They are crowded and huddled in some corners, and do not flower half so well as they would do if better cared for.

LYNCHES GRANDIFLORA SOWING (Mrs. F. W.).—There are two seasons of sowing this:—September for flowering in May and June, when it would be of most use to bees; and March and April for blooming in July, August, and September.

HEATING A SMALL PIT (An Amateur).—We are almost sure that as you have a boiler and hot-water pipes for your vinery, the simplest and most economical mode for heating the small pit for Cucumbers, &c., at the end of the vinery, would be to take a flow and return pipe to your pit, and from them heat the little pit independently of the vinery. We would have been more decided on this point if you had given us the position of the boiler. Of course, the simplest of the portable hot-water apparatuses would do for such a little place; but we think the simplest and cheapest of them would cost you more labour and expense than heating from the present boiler. Were we to heat such a little place for ourselves, we would fix a brick Arnot's stove, with or without a fire in the house, but to be fed from the outside low enough to have a chamber for giving bottom heat and means for imparting moisture to the top heat.

CHARCOAL-HEATED STOVES—HOT-WATER APPARATUS—VENTILATING GREENHOUSE (A Subscriber).—We think the canaries will decidedly suffer unless there is a little ventilation at the top of the house night and day, or the laps of the glass admit fresh air. That the hot-water apparatus to be heated by lamps will be effectual for a house 21 feet by 12, will depend on the height of the house and the size of the lamps. For a house of that size, a little furnace would often be the best. There should also be a funnel to take away the products of combustion from the lamps. If the water in your pipes is not more than 160° or 170°, you will require at least 50 or 60 feet of three-inch pipe. Where frost was merely to be excluded, we would prefer a small iron stove with a flat top for placing a basin of water on, with a pipe through the roof to take away the products of combustion. We object to the charcoal stove unless you have a funnel to take off the products of combustion. A stove, though small, if supplied with charcoal or broken coke, will give off a great amount of heat. The only care required is not to place the stove too near tender plants, and to neutralise the dry heat by moisture. Notwithstanding all improvements, the most economical plan for a single small house is a moveable stove, which may be taken out of the house from April to the end of October. Brick stoves are better than iron, but then they are fixtures. Moreover, neatness is always gained when the fire either of a stove, or a furnace, or a boiler is fed outside of the house; but in a single house we believe it is gained at the expense of economy. Ventilation is not always wanted at the top of such a house, but it is desirable to be able to give it there when necessary. For a house only 21 feet long, however, you may dispense with the ugliness of ventilators in your fixed roof, by having a piece of the angular ends close to the apex made to open—say a right-angled triangle, with a base and perpendicular of 18 inches.

DESTROYING INSECTS IN HERRARIA (W. R. H.).—The best way of doing this is to give the specimens a dressing with a solution of corrosive sublimate in methylated spirits of wine. It can be done with an ordinary painter's brush, and the sheets afterwards laid out to dry.

NAMES OF FRUITS (Tyro).—No. 1 (Apple), Sturmer Pippin; 2 (Pear), Striped Virgouliense. (A. T.).—1, Cornish Gilliflower; 2, Marmalade Pippin; 3, Elgeon; 4, Autumn Pearmain. 1 (Pear), Beurre Bosc. Grape Trebbiano.

NAMES OF PLANTS (G. S. Cornwall).—*Teosma jasminkoides*, a native of New Holland. It requires a greenhouse in most parts of England, and its being in full bloom on November 28th, against the front of your house, is an evidence of the mildness of your situation. (*Conifera*).—The scraps of *Scelopendrium* it is impossible to identify. No. 6 may be *digitatum* starved. (*C. C.*).—*Lastrea montana*, synonymous with *L. oreopteris*. The other specimen apparently a starved *Ferdinandia eminea*. (W. R. H.).—1, *Rhus aculeatus*; 2, *Salix ambigua*. (Mary D.).—*Calceolaria scabrofolia*. (*Xanthoxylon*).—1, *Drynaria muscicola*; 2, *Gymnogramma chrysophylla*; 3, *Asplenium marinum*; 4, *Salaginella cuspidatum*. (*Dr. Sarsfield*).—Your Queensland Cotton is the variety of *Gossypium barbadense*, known as "Sea Islands Cotton." (*Orchidophilus*).—*Ornithogalum caudatum*. The Saxifrage appears to be a tufted and much-eleft variety of *S. hypnoides*. (C. R. B.).—1, *Cyanotis vittata*; 2, *Coloas* sp. (bad specimen). (C. R. P.).—The Orchid is *Epidendrum cochleatum*. *Gymnostachyum Verschaffeltii* and *Anthurium leuconeurum* are totally distinct plants, wide as the poles apart. Send us a leaf and we will tell you which your plant is.

POULTRY, BEE, and HOUSEHOLD CHRONICLE

POULTRY JUDGES.

We have received an unsigned letter, but bearing a post-mark indicating whence it emanated, asking in no very courteous phrase "Whether we shrink from the sound opinion we formerly held that dealers should not be selected as judges." Our reply might be more brief than the query. We do not shrink from that opinion; but we have a few

remarks to add, from some of which we hope, in our turn, that our anonymous catechiser will not "shrink."

There is no doubt that among dealers in poultry are men possessed of much sounder knowledge of the good condition and desirable characteristics of each variety of fowl than can be found usually among amateurs; and the chief objection to dealers being judges is that they might recognise birds which they had sold, and might be prejudiced to decide in their favour. If, therefore, such amateurs as the Rev. Mr. Pulleine, the Rev. W. W. Wingfield, Mr. Hewitt, Mr. Andrews, and one or two more we might name, could officiate at all the poultry shows in the three kingdoms, we should not require any argument to induce us to say, Let them, and no others, be judges at those exhibitions. Those gentlemen, however, could not spare time to be such judges-general, and other amateurs so qualified are not sufficiently numerous. Dealers, and amateur-dealers, consequently have to be employed, and the distinction between these two classes is not always so clear, nor the characteristics of honesty always so developed in the amateur-dealer as to enable a committee to decide without hesitation to select him as judge. Letters written to judges indicating the pens in which certain birds were to appear; mending broken feathers, and removing other feathers that were of the wrong colour; having relations who were *bond fide* dealers, and with whose birds they were thoroughly conversant, are all events that have occurred among amateur-dealers, and which do not incline committees to select judges from among them.

This leads us to observe that we advise poultry show committees to trust to their own judgments in selecting the judges, for they have quite sufficient knowledge; and they stigmatise themselves if they act as if they thought they were not quite as honest—quite as little actuated by wrong motives—as are the members of any club, though these modestly assume that they ought to have the appointment of the judges and the entire management of all the poultry shows in the United Kingdom.

BIRMINGHAM POULTRY SHOW.

GREATNESS, according to our immortal poet, may be a birthright, or may be achieved, or it may be thrust on a man *nolens volens*, as with a friend of ours, who, in the machine-breaking riots, many years since, met some hundreds of rioters in a narrow lane, and, being on horseback, was at once surrounded, elected as leader, and compelled to go with them. The public-minded men who originated this great Exhibition, and who still carry it on, must, we think, belong to the second category. It is the most arduous, but it is also the most durable.

Sixteen great Shows, one after the other, all eclipsing their predecessors, are the results of those qualities that command success in life, whether they are exercised in a public, or a more limited private capacity. We can never look at this great undertaking without reverting to its beginning. We doubt whether the most sanguine of those who assisted at its birth anticipated a third of the success that has attended it. The show week has become an institution in Birmingham—cattle followed poultry, roots followed cattle, implements followed roots, and then, spite of size and galleries, Bingley Hall was full. The influence of the Exhibition is felt without—the Dog Show and the Flower and Fruit Shows are offshoots of it. Viewed as a public undertaking, it has filled the streets of Birmingham till police measures have become necessary to prevent crowds and accidents. Wherever you turn your eye you see a printed notice asking you to "keep to the right." This insures circulation spite of numbers. Beds are at a premium, and hotel accommodation can only be had by being bespoken long beforehand. The streets are filled with holiday people, and everything is done to make the town attractive. On Tuesday a novel procession was organised—fire engines, decked with flags and ribands, and carrying stalwart firemen, in smart uniforms and glittering helmets, were each drawn by four grey horses, and preceded by mounted police and a numerous band.

The increase of that part of the Show with which we have more particularly to do is a thing to be recorded annually. At different periods rules have been imperatively necessary

to limit the entries; and while, in many exhibitions, an extension of time is allowed, and exhibitors are solicited to send birds, in this instance there is no deviation from the fact; the entries close, and this year more than a hundred were refused, on the second day of November. The sum now given for poultry prizes is a very large one, and the managers are always open to suggestions for any alteration in the list. In poultry, as in other things, there are ebbs and flows, and the breed that one year is more numerous than any other, may in three years time be only third or fourth on the list. If exhibitors ask for fresh classes they are immediately given as an experiment. If they are well supported they are continued; if they are not they are withdrawn. Silver Grey Dorkings asked for classes, and had them, but they could not maintain them. The general Dorking classes had more prizes, and new ones were this year made for Crève-Cœur and Black Hamburgs. Both will apparently be successes.

We need hardly say that the *Dorking* classes were remarkable for the quality of the birds shown. They always are; but they were on this occasion worthy of notice from the fact there was not an inferior bird in them. The Viscountess Holmesdale and Capt. Hornby were the most distinguished; and we were glad to see that birds travelled from Dublin were able, in the face of such competition, to take a fourth prize. Mr. Palmer Williams accomplished this feat. There was hardly a pen in these classes that did not merit a commendation. The birds were large, handsome, and healthy.

The classes for hens and pullets were well filled, and showed excellent birds. Captain Hornby's pullets will make good hens next year. Dublin again took the second prize with fine birds of Mr. Boyle's. Lady Holmesdale and the Rev. Mr. Cadogan were deservedly prizetakers.

The White Dorkings were highly meritorious.

We have before spoken of ebbs and flows, and an instance of them is now before us. A few years since *Spanish* fowls were supposed to be at their highest, and they then declined in importance and merit. They have scarcely held their ground these four years. The classes now shown indicated one of the most extraordinary improvements ever seen; there were lots of perfect birds. Mr. Rake's, shown by their different purchasers, were the most successful. Mr. Jones, Mr. Lane, Lady Holmesdale, Miss Biggar, and Mr. Teebay, not only sent capital birds, but they were all in unusually good condition. We know not the reason, but at all shows the classes for *Spanish* hens and pullets fill badly as to numbers. The present was no exception.

Cochin-Chinas were good as were ever shown during the sixteen years that have passed since they first tenanted Bingley Hall. Captain Heaton's strain proved itself the best last year, and it kept its word of promise now. His yard was first in adults, chickens, and single cocks. But it must not be thought the success was easy. Neither Mr. Stretch nor Mr. Bates is defeated without a struggle in these classes; and Mr. Bishop showed himself strong in numbers as well as quality. In these classes the hens and pullets are far more numerous sent than in most others; Messrs. Smith and Yardley were deservedly winners. The Brown and Partridge were very good, and they introduced some new names among the winners. An old one, Mr. Stretch, was first in chickens. The Whites were excellent; Mr. Chase and the Rev. F. Taylor took all the prizes. These formed numerous classes. We believe some of the heaviest *Cochins* ever seen might have been found among the Grouse and Partridge birds.

The next class is one that has steadily and deservedly worked its way in the public estimation. *Brahma Pootras* have held on through abuse and neglect till they have become an important class. Two of the five prizes went to Dublin, and the first in adults was awarded to Mrs. Hargreaves, of Arborfield.

The *Malays* were excellent, but it is a pity they are not more numerous. The same may be said of the *Crève-Cœur*.

The *Black Hamburgs* justified the liberality that gave them classes by numerous entries, and their exhibitors show they can send first-rate specimens in good condition. We are told these beautiful birds are common in parts of Yorkshire. We look for large classes in future, and therefore offer a word of advice. These birds must not have white faces. The Golden-pencilled were far better than the

Silver. The Silver breeders are neglecting the accuracy of the markings, and forgetting the tendency there is in these birds to become lighter as they become older. Clear hackles have been secured at the cost of pencilling on the wing and tail. We think perfection in these birds must not be sought. If a well-pencilled tail and marked wing can only be had in conjunction with a partially-spotted hackle, we must submit to it as the less evil. Although the same may be said of the Spangled classes, it must be qualified. The Silvers were only inferior to the Golden because the latter were unusually good. We have seldom seen a better pen than that shown by Mr. Hyde. All the prize birds in these classes were good, but the Silvers were in some instances too light. The cocks were especially deficient in marking on the wings.

We can speak most highly of all the Poland; the only desideratum was an increased number of entries. Mr. Adkins has a speciality for Silvers, and Mr. Edwards for Black with white tops. All were beautiful.

The Various class brought many pens of Cuckoos, a beautiful pen of La Flèche, some good Silkies, but none of the monstrosities that used to fill up its numbers in former years.

As usual, the Game formed a capital show without assistance from any other breed. Their condition and beauty of feather were worthy of all praise, and showed that the descendants of the old cockers had not failed to benefit by the knowledge and experience of their predecessors. It is almost impossible to particularise all that deserve especial notice; yet the veriest tyro in Game fowls, or one who had never before admired them, would not fail to be struck with the surpassing beauty and excellence of Mr. Statter's cock that took first in Class 50, and deservedly received the extra prize of five guineas as the best in the Show. Mr. Worrall's pullets, and two pens belonging to Sir St. G. Gore, were next in merit.

It is almost painful to leave as many good birds unnoticed as we are compelled to do in these beautiful classes. Our last week's hasty prize list will have told the winners. The Brown Reds were certainly this year better than the Blacks. The Duckwings were very handsome; Mrs. Hay, Messrs. Wood, Aykroyd, and Fletcher may be proud of their laurels.

Our task is something like Penelope's web. We have to begin again. We have no doubt—indeed we are sure—the *Single Cock* classes are a boon to purchasers. We doubt whether they are as acceptable to judges, and we are sure they are not to reporters.

It may be said of the Dorkings that they presented an unrivalled show. Lady Holmesdale, Lady S. Des Vœux, and Messrs. Tudman, Robinson, and Arkwright were successful—no small boast. A prohibitory price hardly saved the birds in this class, and all moderately-estimated ones were immediately sold.

The Spanish showed the same improvement that the general classes did. Right good birds were sent from all parts of the United Kingdom. In sporting phraseology we should still say—Bristol for choice. Manchester bore the bell for Cochins—Capt. Heaton first, closely followed by many of the "celebrities." In Partridge cocks, there was a notable display of excellent birds, many of great weight. Brahma Pootra cocks richly deserved the prizes awarded to them. Messrs. Pigeon, Statter, and Boyle showed very fine birds, and took the prizes in order.

The Hamburgs call for little notice beyond a general commendation, and the remark that in these classes the best cocks seemed to be reserved to compete together rather than to exhibit themselves with their hens. In these, as in the Dorkings, the non-prohibited birds were snapped up. The Polish cocks were good. Spite of Shakespeare's ideas on the subject, there must be something in a name. The same occur in the Game cock classes as in the general competitions; and Mr. Statter also takes the extra silver cup for the best among the good. Mr. Matthew Leno and Mr. Uriah Spary took the prizes for Gold and Silver-laced Bantams. A cock among the latter must be as tired of taking prizes as Talleyrand was of oaths of allegiance. The Black and White were very numerous and beautiful; and among the Varieties, which mustered well, there were all sorts of oddities—the Japanese, which appear ashamed of their legs, and hide them with their wings; the booted White ones; the Speckled ones; three hens of serious-looking, most diminutive Buff Cochins; and many whose

origin we can only guess at. And then, the Game Bantams—such a display of little beauties—Black-breasted Reds, Brown Reds, Duckwings, and Piles; Miss E. Crawford took first and extra prize. There were scarcely any inferior pens. Mr. Postans's first-prize birds were beautiful.

The public who read this, if any get as far, has no idea of the difficulty in finding words to describe the same events eighty-three times over without falling into the most painful tautology. We are arrived at Class 83—Aylesbury Ducks. We may expect to go on swimmingly. Mrs. Seamons achieved an exploit—first prize with three Ducks weighing 27 lbs.; Fewler second, 25 lbs.; Seamons third, 24 lbs. This was a good class, but it was a nonentity compared with its successor, Rouen Ducks. There were halcyon days when three out of four pens had faulty bills, and half the remainder were fitted to ride feather weight. Now all want close examination, and half require to be weighed. Fifty pens competed—Mr. Shaw first, 25 lbs.; Mr. Worrall second, 24½ lbs.; Mr. Anderson third, 24 lbs.; Capt. Hornby fourth, 23½ lbs. Many commended pens deserved prizes. Beunos Ayrean were remarkably good, especially the three prize pens; nine others were in the prize sheet. Various Ducks brought Carolinas, Brown and White Calls, of great merit.

Getting to the Geese is like seeing the lights in the distance; we are getting near home. Mr. Duxbury's old White Geese weighed 84 lbs.; Mr. Kershaw's, 57 lbs.; and Mr. Faulkner's, 54 lbs. The young ones, Mrs. Seamons', 57 lbs.; Mr. Lysett's, 52 lbs. The old Grey birds weighed badly. The young ones made amends—Mrs. Seamons', 61 lbs.; Mr. Lort's, 57 lbs.

The old prize *Turkeys*, 63 lbs., 61 lbs., and 60½ lbs.; the young birds, 47 lbs., 46½ lbs., and 46 lbs. Several of the commended pens weighed more than 43 lbs.

It is needless to say everything was well conducted; Messrs. Luckcock, Matthews, Shackel, Wright, Lowe, Maplebeck, Adkins, Sabin, and others are always at their posts. No question can arise that will not have an immediate solution; no complaint that will not meet with ready redress. In the name of the poultry public we thank them all, and congratulate them on their deserved and continued success.

The heavy rain on Monday morning did not diminish the attendance of visitors to the extent which might have been expected. The number was 7083, against 6445 last year—namely, 4,248 by subscribers' tickets; 2,131 by pay; ment of 5s.; and 704 by payment of 1s. each.

In the poultry sales, up to Tuesday evening, there had been a slight falling off, the amount on Monday being £616 7s. 6d., against £661 12s. 6d. last year; and on Tuesday £208 19s., against £189 7s. in 1883.

We published the prize list last week, and now give the commendations.

DORKINGS (Coloured).—Highly Commended, A. Potts, Hoole Hall, Chester; J. D. Hewson, M.D., Coton Hill, Stafford; H. Lingwood, Needham Market, Suffolk. Commended, Rt. Hon. Countess of Dartmouth, Patahull, Albrighton, Wolverhampton; Rt. Hon. Lady Bagot, Blithfield Hall, Rugby; A. Stanford, Eatons Ashurst, near Steyning, Sussex; Miss Wilcox, Nalisco Court, near Bristol. **Chickens.**—Highly Commended, Rt. Hon. Viscountess Holmesdale, Linton Park, Kent; Lady Bagot; Sir J. D. Wauchope, Bart., Miller's Hill, Dalkeith, N.B.; Rev. J. F. Newton, Kirby-in-Cleveland, near Stokesley, Yorkshire; H. Lingwood; J. Anderson, Melgill, Forfarshire; J. White, Warlaby, Northallerton; A. Potts; R. W. Boyle, Dundrum, Dublin. Commended, Mrs. Arkwright, Etwell Hall, Derby; A. Potts; J. Frost, Farham, Suffolk; Lord Stanhope, Brentby Hall, Burton-upon-Trent.

DORKING HENS.—Highly Commended, Mrs. Young, Eastington Vicarage, Stratford-upon-Avon; Rev. J. F. Newton, Kirby-in-Cleveland, Yorkshire; Rev. E. Cadogan, Walton Parsonage, Warwick; Sir St. G. Gore, Bart., Hopton Hall, near Wirksworth, Derbyshire; W. Harvey, Sheffield; J. D. Hewson, M.D., Coton Hill, Stafford.

DORKING PULLETS.—Highly Commended, Miss Wilcox, Nalisco Court, near Bristol; W. W. Bartlam, Henley-in-Arden. Commended, Rev. E. Cadogan, Walton Parsonage, Warwick; T. Whittington, Preston Hill, near Henley-in-Arden; J. R. Smith, Edgbaston.

DORKINGS (White).—*Chickens.*—Highly Commended, J. Cliff, Dorking, Commended, J. Robinson, Garstang.

SPANISH.—Commended, J. L. Lowndes, Aylesbury; R. B. Postans, Brentwood, Essex. *Chickens.*—Highly Commended, J. Shortrose, Newcastle-on-Tyne. Commended, W. B. Bull, Newport Pagnell, Bucks; E. Teesby, Fulwood, near Preston; E. Draper, Northampton; A. Heath, Calne, Wilts; E. Jones, Clifton, Bristol; R. B. Postans.

SPANISH HENS.—Highly Commended, E. Teesby, Fulwood, near Preston. Commended, J. Smith, Walsall.

SPANISH PULLETS.—Highly Commended, Miss Biggar, Ecclefechan, Dumfriesshire; E. Jones, Clifton, Bristol.

COCHIN-CHINA (Cinnamon and Buff).—Highly Commended, T. Stretch, Ormakirk. Commended, C. T. Bishop, Leaton, near Nottingham. *Chickens.*—Highly Commended, T. Boucher, Birmingham; H. Bates, Yardley, near Birmingham. Commended, C. T. Bishop; H. Bates; Mrs. B. White, Sheffield; T. Stretch; J. Nelson, Heaton Mersey, Manchester.

COCHIN-CHINA HENS (Cinnamon and Buff).—Highly Commended, J. G.

SUGDEN, Keighley, Yorkshire; J. Stephens, Walsall; E. Adams, Handsworth. Commended, H. Bates, Yardley, near Birmingham.

COCHIN-CHINA FULLETS (Cinnamon and Buff).—Highly Commended, J. K. Fowler, Aylesbury; Capt. Heaton, Manchester; E. Yardley, Birmingham; T. Boucher, Birmingham; W. Wood, Sheffield; J. B. Bounton, Derby. Commended, R. Boddington, Birmingham; T. Stretch, Ormskirk.

COCHIN-CHINA (Brown and Partridge-feathered).—*Chickens*.—Highly Commended, R. Tudman, Whitechurch, Salop; — Cartwright, Oswestry; J. K. Fowler, Aylesbury. Commended, J. Poole, Ulverston, Lancashire.

COCHIN-CHINA HENS (Brown and Partridge-feathered).—Highly Commended, R. Adams, Handsworth, Birmingham.

COCHIN-CHINA FULLETS (Brown and Partridge-feathered).—Highly Commended, E. T. Holden, Walsall. Commended, C. Harshaw, Ashton-under-Lyne; E. Tudman, Whitechurch, Salop.

COCHIN-CHINA (White).—Highly Commended, W. Dawson, Hopton, Milsfield, Yorkshire; R. Chase, Balsall Heath, Birmingham; H. Yardley, Birmingham; G. Lamb, Compton, near Wolverhampton. *Chickens*.—Highly Commended, Rev. F. Taylor, Kirby Lonsdale; G. Lamb; H. C. Woodcock, Rearsby, near Leicester; F. F. Zurborst, Dublin; W. Dawson. Commended, G. Lamb; F. W. Zurborst; R. Chase, jun.

BRASSIA FOOTBALLS.—Highly Commended, T. Pomfret, Houghton Lane, near Preston; R. W. Boyle, Dundrum, Dublin; F. Sabin, Birmingham.

Chickens.—Highly Commended, J. Poole, Ulverston, Lancashire; F. R. Pease, Darlington. Commended, J. K. Fowler, Aylesbury; T. Pomfret.

MALAY.—Highly Commended, J. J. Fox, Devizes; W. Watson, Calstock, Tavistock. *Chickens*.—Highly Commended, Rev. A. G. Brooks, Exton, XL Towns, Salop.

CHICK-CHICK.—*Chickens*.—Highly Commended, J. Harrison, Blackpool; W. Blinckhorn, jun., St. Helens, Lancashire.

BLACK HAMBURG.—*Chickens*.—Highly Commended, W. W. Nichols, Sale, near Manchester. Commended, C. Sedgwick, Keighley, Yorkshire; W. K. Duxbury, Leeds.

HAMBURG (Golden-pencilled).—Commended, H. Beldon, Gilstead. *Chickens*.—Highly Commended, Messrs. J. & F. Howard, Bedford; C. Tattersall, Waterfoot, near Manchester; N. Marlow, Denton, near Manchester. Commended, Rev. R. Roy, Worcester.

HAMBURG (Silver-pencilled).—*Chickens*.—Highly Commended, Rt. Hon. Viscountess Homesdale, Linton Park, Kent.

HAMBURG HENS (Pencilled).—Commended, H. Beldon, Gilstead; Rev. T. L. Fellowes, Aole, Norfolk.

HAMBURG FULLETS (Pencilled).—Highly Commended, F. Pittis, jun., Isle of Wight (Golden); E. Smith, Middleton, near Manchester (Golden). Commended, Rev. R. Roy, Worcester (Silver); A. U. P. Gurney, Hampton Place, near Hereford (Golden).

HAMBURG (Golden-spangled).—Commended, W. Kershaw, Heywood, near Manchester. *Chickens*.—Commended, C. Sedgwick, Keighley, Yorkshire; C. Broadbent, Saddleworth, Yorkshire; J. G. Sugden, Keighley, Yorkshire.

HAMBURG (Silver-spangled).—Highly Commended, H. Beldon, Gilstead. *Chickens*.—Highly Commended, Viscountess Homesdale; G. E. Hardman, Rastonsall, Manchester; T. Barnes, Leigh, near Manchester; E. Collings, Middleton, near Manchester. Commended, Mrs. H. Sharp, Bradford; J. Fielding, Newbrough, near Manchester.

HAMBURG HENS (Spangled).—Highly Commended, H. Beldon, Gilstead; S. H. Hyde, Ashton-under-Lyne. Commended, H. Cartes, Holmforth; Messrs. Aston & Sons, Birmingham.

HAMBURG FULLETS (Spangled).—Highly Commended, Sir St. G. Gore, Bart., Wirksworth, Derbyshire; E. Collings, Middleton, near Manchester. Commended, W. Kershaw, Heywood near Manchester.

POLISH FOWL (Black with White Crests).—*Chickens*.—Commended, T. P. Edwards, Lyndhurst, Hants; J. Sunderland, Coley Hall, near Halifax.

SPRING-NECKED VANDERBILT.—Highly Commended, H. Saville, Ollerton, Notts (Japanese Silky); J. L. Lowndes, Aylesbury (Andalusians).

GAME FOWL (Black-breasted Reds).—*Chickens*.—Highly Commended, M. Billing, jun., Erdington, near Birmingham; J. H. Williams, Welshpool. Commended, J. Fletcher, Stonecough, near Manchester; J. Anderson, Meigs, Forfarshire; E. C. Gilbert, Penkridge, Staffordshire; W. Whitehouse, Henley-in-Arden; J. Smith, Grantham; M. Billing, jun.

GAME FOWLS (Brown and other Reds, except Black-breasted).—Highly Commended, J. Fletcher, Stonecough, near Manchester. Commended, J. Linnell, Coventry; M. Billing, jun., Erdington, near Birmingham; T. Statler, Manchester; E. Aykroyd, Bradford. *Chickens*.—Highly Commended, Sir St. G. Gore, Bart., Wirksworth; M. Billing, jun.; G. E. Meredith, Wellington, Salop; A. B. Dyas, Madeley, Shropshire. Commended, J. Fletcher; T. Statler.

GAME HENS (Black-breasted and other Reds).—Highly Commended, W. Bayes, Beverley, Yorkshire.

GAME FULLETS (Black-breasted and other Reds).—Highly Commended, Capt. Heaton, Manchester; J. H. Williams, Welshpool; M. Billing, jun., Erdington, near Birmingham; J. Halsall, Ince, near Wigan; J. H. Braikemridge, Chew Magna, near Bristol. Commended, J. Wood, Wigan; J. Smith, Grantham; R. Swift, Southwell, Nottinghamshire.

GAME FULLETS (Except Black-breasted and other Reds).—Highly Commended, E. Lowe, Comberford Mill, near Tamworth.

SINGLE COCKS.

DORKING.—Highly Commended, Sir J. D. Wauchop, Bart., Miller's Hill, Dalkeith, N.B.; W. Endall, Henley-in-Arden; W. H. Denison, Woburn, Bedfordshire; J. K. Fowler, Aylesbury; R. B. Postans, Brentwood, Essex; E. Shaw, Oswestry; Rev. J. G. A. Baker, Old Warden, Bedfordshire. Commended, J. White, Warley, Northallerton; J. Drowry, Newton Mount, Burton-upon-Trent; Rev. E. Cadogan, Walton Paragon, Warwick; W. W. Barnham, Henley-in-Arden; A. Stanford, Eatons Ashurst, near Steyning, Sussex.

SPANISH.—Highly Commended, Viscountess Homesdale; G. Robson, Hull; W. E. Bull, Newport Pagnell, Bucks; J. L. Lowndes, Aylesbury; D. Parley, Bristol; R. Tebb, Fulwood, near Preston; H. Lane, Bristol; R. Paton, Kilmarnock; E. T. Holden, Walsall. Commended, R. Paton.

COCHIN-CHINA (Cinnamon and Buff).—Highly Commended, Mrs. R. White, Broomhall Park, Sheffield; W. Dawson, Hopton, Milsfield, Yorkshire; W. Wood, Sheffield; T. Stretch, Ormskirk. Commended, C. T. Bishop, Lenton, near Nottingham; F. W. Zurborst, Donnybrook, Dublin; Capt. Heaton, Manchester.

COCHIN-CHINA (Except Cinnamon and Buff).—Highly Commended, T. Stretch, Ormskirk; R. White, Broomhall Park, Sheffield; W. P. Merry,

Coventry. Commended, T. Stretch, Ormskirk; F. W. Zurborst, Donnybrook, Dublin.

BRASSIA FOOTBALLS.—Highly Commended, H. Saville, Ollerton, Notts; H. James, Walsall; W. L. Barclay, Knott's Green, Leyton, London, N.E. Commended, Mrs. Hart, Alderley, Belper.

HAMBURG (Golden-pencilled).—Highly Commended; J. Garra, Wibsey, Slack Side, near Bradford; C. Tattersall, Waterfoot, near Manchester. Commended, W. H. Dyson, Horton Bank Top, near Bradford; J. Holland, Worcester.

HAMBURG (Silver-pencilled).—Highly Commended, J. G. Sugden, Bostwood House, near Keighley, Yorkshire. Commended, D. Harding, Middlewich, Cheshire; J. Robinson, Garstang; J. Holland, Worcester.

HAMBURG (Golden-spangled).—Highly Commended, Messrs. Aston and Sons, Birmingham; I. Davies, Hartburn, near Birmingham; J. Roe, Hadfield, near Manchester. Commended, H. E. Embellie, Hambleton, Leicester.

HAMBURG (Silver-spangled).—Highly Commended, Viscountess Homesdale, Linton Park.

GAME (Black-breasted Reds).—Highly Commended, J. Stubbs, Weston Hall, Stafford.

GAME (Brown and other Reds, except Black-breasted).—Highly Commended, J. Linnell, Anstey Hall, Coventry; R. Swift, Southwell, Notts.

BANTAMS (Gold-laced).—Highly Commended, Rev. G. S. Crawley, Tiverton, Devon; J. Crossland, jun., Wakefield; M. Leno, jun., Dumstable, Bedfordshire.

BANTAMS (Silver-laced).—Highly Commended, U. Spary, Dunstable, Bedfordshire. Commended, F. R. Pease, Southend, Dartford.

BANTAMS (White, Clean-legged).—Highly Commended, Sir St. G. Gore, Bart., Wirksworth, Derbyshire; Cape Veshall, Loddington, near Kettering; G. Hollowell, Walkley, near Sheffield; H. E. Embellie, Hambleton, Leicester.

BANTAMS (Black, Clean-legged).—Highly Commended, F. Pittis, jun., Newport, Isle of Wight. Commended, J. Ludlow, Solihull; F. Pittis, jun.; J. Jackson, Hall Green Hall, near Birmingham.

BANTAMS (Any other variety except Game).—Highly Commended, R. Chase, jun., Balsall Heath, Birmingham; H. C. Woodcock, Rearsby, near Leicester; J. D. Newsome, Batley, near Leeds; F. R. Pease, Southend, Darlington; A. G. Cane, St. John's College, Cambridge.

GAME BANTAMS (Black-breasted and other Reds).—Highly Commended, R. Hawkey, jun., Southwell, Notts; J. Mann, Newchurch, near Manchester; J. W. Morris, Rochdale; C. Auckland, Chesham; R. B. Postans, Brentwood, Essex; Rev. G. Raynor, Kilmarnock, Hants. Rectory, near Broomfield, Essex.

GAME BANTAMS (Any other variety).—Highly Commended, J. Crossland, jun., Wakefield; J. G. Pearson, Whitchurch, Salop.

GAME BANTAM COCKS.—Highly Commended, Miss S. N. Hill, Shawbury; Mrs. C. W. Brierley, Middleton, near Manchester; J. D. Newsome, Batley, near Leeds; J. Holme, Knowsley, near Prescott; J. W. Morris, Rochdale; H. C. Woodcock, Rearsby, near Leicester; W. J. Cope, Barnsley; E. Brown, Sheffield.

DUCKS (White Aylesbury).—Highly Commended, T. Hallis, Reading; Mrs. Seamons, Aylesbury; J. K. Fowler, Aylesbury.

DUCKS (Rouen).—Highly Commended, T. Statler, Manchester; J. Holme, Knowsley, near Prescott; J. Mann, Newchurch, near Manchester; H. C. Woodcock, Rearsby, near Leicester; H. Worrall, West Derby, near Liverpool; W. H. Denison, Woburn, Bedfordshire. Commended, T. Hallis, Reading; S. Lang, jun., Redland, Bristol.

DUCKS (Black East Indian).—Highly Commended, Miss Oulton, Whittington, Worcester; J. W. Smith, Gundle, Northamptonshire; Mrs. Wolferstan, Tamworth; J. Holdway, Weston, near Bath. Commended, Mrs. Wolferstan; F. W. Earle, Edenhurst, Prescott; Rev. W. Gover, Salfrey Training College, Birmingham; W. Watson, Calstock, Tavistock; J. K. Fowler, Aylesbury.

DUCKS (Any other variety).—Highly Commended, D. Parsons, Gurdons, near Preston. Commended, H. Saville, Ollerton, Nottinghamshire.

GREYS (White).—Highly Commended, H. Saville, Ollerton, Notts. Commended, J. K. Fowler, Aylesbury; W. Lort, jun., King's Norton, near Birmingham.

GREYS (Grey and Mottled).—Highly Commended, E. Herbert, Powick, near Worcester; Hon. Mrs. Colville, Lullington, Barton-upon-Trent; J. K. Fowler, Aylesbury.

TURKEYS.—Highly Commended, Mrs. A. Guy, Eaton, near Grantham; W. Lort, jun., King's Norton, near Birmingham. *Poulters*.—Highly Commended, Mrs. Wolferstan, Tamworth; Mrs. A. Guy, Eaton, Grantham; J. Smith, Braemar Hills, Grantham.

PIGEONS.

THE Pigeons, numbering three hundred pairs, were ranged in one of the galleries, and were of easy access to the visitors.

Almond Tumblers formed the first class. Mr. Elze was first with a pair very fine in feather; the second-prize pair contained a splashed and unevenly-matched pair; while Mr. Eden's third-prize birds, although not equal in feather to the first, were very much superior in head and beak to either pen.

Carriers were divided into four classes of single birds. In the two for Blacks, cocks and hens respectively, Mr. Elze took both first prizes; Mr. Eden had second positions, each with particularly good birds. In cocks, Any other colour, Mr. Eden had first with a splendid Dun; Messrs. Siddons second with a good bird of the same colour. In the like class for hens the first prize went to a Dan-cock, shown by mistake we imagine.

In the four classes for Pouters Mr. G. R. Potts had a great success, taking three out of the four first prizes. In that for Red or Blue cocks a Red, very lengthy in feather and limb, was first, and a good Blue second. In Pouter cocks,

Any other colour, both prizes were awarded to good Whites, Mr. Eden's first-prize birds being particularly noticeable. In Powder hens, Red or Blue, Messrs. Potts and Eden took the prizes with fine Blues, and the former received high commendation for a very handsome Red. In Powder hens, Any other colour, a very fine Black was first, White second, and a fair Yellow was highly commended.

The class for *Balds* was only small. Mr. Ridpeth substituted a fine pair of Blues for his Sunderland Blacks, and took first position; Mr. Esquilant had second with very good Blues, the first-prize Islington Yellows being unnoticed.

In *Beards* Mr. Oates maintained his position with his splendid Blues, Mr. Else taking second.

In Mottled *Tumblers* Mr. Eden's wonderful Black Mottles out-distanced competition. In Tumblers, Any other variety, good Kites took both prizes.

The class for *Runts* was unusually large and good. The first and second prizes were awarded to Blues, the third to Silvers.

In Yellow *Jacobins* Mr. J. T. Lawrence held his own, gaining both prizes with splendid birds; and in Jacobins, Any other colour, Blacks took both prizes. Mr. Lawrence's first-prize pen contained a hen rather coarse in head; the second-prize pair were rather faulty in eye, but small and fine. Mr. Esquilant's extraordinarily fine pair of Cup Reds were entirely passed over.

In White *Fantails* plain-headed birds won on this occasion (both prizes falling to crested birds last year); a crested pair received high commendation, and an unusually good pair of plain-headed were commended. Fantails, Any other colour, only numbered four pens, the prizes being awarded to good Blues and Blacks in the order named.

In Mottled *Trumpeters* Mr. Shaw held his accustomed place, taking first. The cock has occupied the same position at Birmingham five years in succession, being the remarkable old bird originally belonging to Mr. F. Mewburn. Although well shown, the hen accompanying him is not equal to his former companion for four years. Mr. Robinson had second prize with a pen much out of condition, and containing one of his Sunderland Cup birds. In Any other colour Trumpeters Mr. Shaw had first with good Black, peculiarly known as "Balaklavas;" and Mr. Oates was second with capital Whites.

In the two classes for *Owls* the small foreign variety took all the prizes. In that for Blue or Silver the former gained both prizes. A very poor pair of light powder Blues were highly commended. In Owls, Any other colour, Mr. Sanday repeated his Sunderland victory with his well-known Whites. Whites were also second and highly commended; a pair of Blacks, unevenly matched in eyes, also received the same distinction.

In *Nuns* good black-headed birds took the prize.

Turbits were divided into two classes. In the one for Red or Blue, Red had both prizes, the first being given to a peaked-crowned pair, and the second to very good shell-crowned birds. In *Turbits*, Any other colour, a strong coarse pair of peak-crowned Yellows were first, and Silvers second, Blacks being commended. At Birmingham last year shell-crowned birds took precedence in both classes.

Barbs also had two classes, Blacks and Any other colour, with seven pens competing in both classes. Mr. Eden obtained first in each with Blacks and Yellows respectively. In the latter class Mr. Oates's second-prize pen contained a particularly good Red cock, much the best bird exhibited.

Dragoons formed a large class. Blues were first, Silvers second, and Yellows third.

Maggies, *Antwerps*, and *Archangels* were ordinary classes.

In Any other new or distinct variety, Mr. Shaw's German *Latz* were first, Mr. Yardley's *Satinettes* second, and Mr. Heath's *Isabels* third. *Frillbacks* and *Black Spots* were highly commended; while *Blue Brunswicks* and *Rangoon Shakers* received commendation.

The Commendations were as follow:—

Tumblers (Almond).—Highly Commended, J. Ford, Monkwell Street, London.

CARRIERS (Black).—Cock.—Highly Commended, T. Colley, Sheffield. Commended, E. Snow, jun., Birmingham; T. Colley.

CARRIERS (Any other colour).—Cock.—Commended, C. J. Samuels, Leag, night, near Manchester. Hen.—Highly Commended, T. Colley, Sheffield. Commended, G. Reeson, Hull; J. W. Edge, Aston New Town, Birmingham.

POWERS (Red or Blue).—Cock.—Very Highly Commended, R. Adams, Handsworth, Birmingham. Hen.—Highly Commended, G. B. Potts, Sunderland. Commended, G. H. Ellis, Leicester.

POWERS (Any other colour).—Cock.—Highly Commended, J. R. Harvey, M.D., Cork. Hen.—Highly Commended, J. R. Harvey, M.D.

BEARDS.—Highly Commended, J. Percival, Rye Lane, Peckham. Commended, J. Fielding, jun., Rochdale.

TUMBLERS (Mottled).—Commended, F. Else, Baywater, London.

TUMBLERS (Any other colour).—Commended, S. Shaw, Halifax.

RUNTS.—Highly Commended, C. Baker, Pheasantry, Chelsea; T. D. Green, Saffron Walden, Essex. Commended, T. D. Green. A good class.

FANTAILS (White).—Highly Commended, H. Yardley, Birmingham.

Commended, F. Else, Baywater, London. A very good class.

TRUMPETERS (Mottled).—Commended, S. A. Taylor, Birmingham.

OWLS (Blue or Silver).—Highly Commended, C. F. Allison, Aston, Middlesex; C. Balpin, Bridgewater. Commended, F. Else, Baywater.

TURBITS (Any other Colour).—Commended, R. Adams, Handsworth, Birmingham.

DRAGONS.—Highly Commended, T. Whitley, jun., Halifax. A good class.

MAGGIES.—Highly Commended, P. Eden, Salford. Commended, E. Pigeon, Lymington, near Exeter.

ANTWERPS.—Highly Commended, H. Yardley, Birmingham.

TURBITS (Red or Blue).—Commended, H. Yardley, Birmingham.

ANY OTHER NEW OR DISTINCT VARIETY.—Highly Commended, H. Yardley, Birmingham (Spots); F. H. Paget, Birstall, Leicestershire (Rangoon Shakers);

Commended, H. E. Emberlin, Humberstone, Leicestershire (Blue Brunswicks); A. Heath, Calne, (Frillbacks.)

JUDGES.—*Poultry*: Rev. R. Pulleine, The Rectory, Kirby Wiske, Thirsk; G. J. Andrews, Esq., Dorchester; Mr. J. Baily, Mount Street, Grosvenor Square, London; J. H. Smith, Esq., Skelton, Grange, York; Mr. J. Hindson, Barton House, Everton, Liverpool. *Pigeons*: Mr. H. Weir, Lyndhurst Road, Peckham, London; Mr. T. J. Cottle, Pulteney Villa, Cheltenham.

STEWARDS.—G. C. Adkins, Esq., Mr. W. B. Mapplebeck, Mr. W. Lort, jun., and Mr. F. Sabin.

SUPERINTENDENT.—Mr. R. Shookley.

The following is a statement of the receipts, number of persons admitted, and number of entries in the present as compared with former years:—

ENTRIES.	1861.	1862.	1863.	1864.
Cattle	104	131	163	151
Sheep	66	110	92	104
Pigs	72	90	93	91
Roots	196	118	124	199
Corn		15	57	69
Poultry	1397	1364	1305	1677
Pigeons	220	232	275	340
Total	2035	2038	2309	2492
Number of 1861.	1862.	1863.	1864.	
Admissions.. 59,799	60,961	61,530	62,533	
Receipts* .. £ s. d. 1861 6 4	£ s. d. 1862 5 6	£ s. d. 1863 17 3	£ s. d. 1864 3 10	

POULTRY CLUB MEETING.

A MEETING of the Poultry Club was held at the Bingley Hall Tavern, Birmingham, on the 28th ult., present Messrs. Tudman, Munn, Boyle, Guy, Challoner, Robinson, Dolby, Anderson, Zurhorst, Tegetmeier, C. Lister, Teebay, Rev. F. Taylor, Crossland, T. H. Ashton, Pearson, Monsey, Swann, Maples, Lane, J. K. Fowler, Harvey, Wood, Mason, Powers, Pettis, and some others.

Mr. Boyle having been called to the chair, and a balance-sheet showing a favourable balance of £22 4s. 8d., handed round, the minutes of the last meeting (of which an account was given at page 317), were read.

Some remarks having been made on the conduct of the Secretaries, Mr. Tudman said that he found the Club an enormous undertaking, and wished to be relieved of his office, he thought that what had passed was equivalent to a vote of censure on the Secretaries (No! No!), and he therefore begged to resign.

The Chairman said he was sorry to hear it, but if Mr. Tudman had made up his mind to do so they must bear the loss. Perhaps Mr. Munn would act.

Mr. Munn (the other Secretary), said there was actually more work with two Secretaries than with one. He had been looking through the letters from Mr. Tudman, and found that there were upwards of fifty, besides those which had been destroyed at the time they were received. He certainly could not undertake so large an amount of business; he therefore begged to resign, and hoped that they would appoint some other good man.

* The amount received for the working-class tickets is not included in this statement.

The Chairman moved that the resignations be accepted, when Mr. Tegetmeier said, he believed it was out of order for such a motion to proceed from the chair, and begged to move, as a matter of form, that the resignations be accepted. This was seconded by Mr. —, who stated that he did so with very great reluctance, but he thought the Secretaries should know something of the business with which they were connected. He quite understood the difficulty of corresponding with each other.

Mr. Tudman said that much rested with Secretaries, and thought they ought to have discretionary power. Whoever they had for Secretary should have discretionary power. Something should be said about the price of the Rules, only fifty had been printed, and these had been sent to members, with the exception of such as were required by judges.

The resignation of the Secretaries was then accepted.

Mr. Zuerhorst then said, he had had something to do with bringing about the resignations; he was aware that the Secretary of an institution like this had much to do to please all, but whoever undertook the office it should be thoroughly and properly fulfilled. At the last meeting there were no minutes and no balance-sheet. (Mr. Tudman here said, with reference to the latter, the funds had to be considered, the Club was yet in its infancy.) The Club had no press assistance, and without a head they were now in a "very great fix." Mr. Munn might consider writing fifty letters a very great difficulty, but many men did so and thought nothing of it. If the work were too much the next Secretary should have a paid assistant. There were many complaints now about letters not being answered, but if they paid an assistant they could hold him responsible. He had no doubt such an one would be found. Although the Secretaries had not done all that was possible, and the Club had got in a bit of a mess, he moved a vote of thanks to them, and this being seconded by Mr. Tegetmeier, was carried unanimously.

Mr. Tudman was then elected Treasurer.

Mr. Munn next entered into some explanations regarding the revised Rules not being published, and the difficulty the Secretaries laboured under in reconciling the differences of opinions which had been expressed by those to whom they had been submitted.

Some discussion then took place as to who was to go through the book and opinions on it, and how this was to be done.

Mr. Zuerhorst proposed a sub-committee for the purpose, and named Messrs. Teebay, Dixon, and Challoner as fit persons to act, and moved that they be requested to revise and consider the Rules when they met at the Manchester Show, and this motion was carried.

Mr. Munn said the next business was to elect a Secretary.

Mr. Zuerhorst proposed Mr. Dolby, and was seconded by Mr. Fowler.

A motion was then made that the present Secretaries be invited to act till the Manchester Show; and Mr. Munn said, as there was some difficulty in choosing a fresh Secretary, if the Club would allow him he would be Secretary for another year, provided Mr. Dolby were permitted to assist him.

Some objection was made to Mr. Dolby's residing at Dublin, as being likely to cause delay in correspondence, when Mr. Dolby said it was only one day's post to Dublin.

The motion was then put that Mr. Dolby be appointed Secretary, and carried by a large majority.

Mr. Munn said their next business was to elect Stewards for the ensuing year. Captain Hornby, R.N., had refused to act, and Mr. Hyde was disqualified for re-election from non-attendance.

Mr. Harvey thought so many Stewards cumbersome; he did not know where there were so many who had done so little. It was much better to have two or three in whom they could place confidence than twelve or fifteen.

Mr. Ashton said there were four or five Judges who were *ex officio* Stewards.

The following gentlemen were then elected Stewards—viz., Messrs. Fowler, Ashton, Munn, Kelleway, Stretch, T. P. Wood, Hawkesley, Zuerhorst, Boyle, Eden, Crossland, and Beldon.

Mr. Wood proposed Mr. Tegetmeier as one of the Judges of Pigeons.

Mr. Tegetmeier thought that such a meeting was neither the proper time nor place for the election of Judges; he considered that if the meeting elected him to the office it would be a mischievous precedent, and injurious to the best interests of the Club; for the election of Judges should not be left to a single meeting, but to the Stewards.

Mr. Munn then proposed a vote of censure on the management of the Birmingham Show in respect to their selection of judges; and the motion having been seconded by Mr. Tudman, was carried unanimously.

The minutes of the last meeting were then confirmed, and the proceedings closed with a vote of thanks to the Chairman.

The following were proposed as new members of the Club at the meeting, and subsequently during the Show—viz., Messrs. E. Brown, Monsey, Carless, F. Elise, M. Headley, T. Colley, C. Lister, W. J. Cope, R. Swift, W. H. Oates, F. Esquilant, J. A. Briggs, C. Maples, jun., R. Woods, J. Staley, and G. Manning; Rev. F. Taylor, and Sir E. Clifton, Bart., M.P.

CHIPPENHAM POULTRY SHOW.

HAVING walked, according to my annual custom, through this Show, peeping and peering into each pen, noting excellencies and defects, I now sit down to give a fair and unbiassed account of the same. The Show this season was the largest ever known at Chippenham. It might be larger; but the Committee fear if they advertised it extensively they should not be able to accommodate all the poultry that would be sent. I own I think this wrong, for room might easily be made for fifty more pens.

The next point I would notice is that the birds were exceedingly well judged by Mr. Rodbard. I had the pleasure of walking round the Show with that gentleman after the prizes had been awarded, and in my humble opinion never were prizes awarded more fairly and correctly.

I was sorry to see that there was a falling-off in the quality of the Game birds shown. Now, it is not enough that a bird is a Game cock, but none that is not at any rate a tolerably good Game cock should be sent to any show. But proceed in due order according to the catalogue.

Dorkings, eight pens, good birds. Mr. Peacey, of Chelworth, first prize; Mr. F. Bailey, of Calne, second. *Spanish*, three pens. Mr. A. Heath, of Calne, won first with a good pen. *Game*, Black-breasted Reds, eighteen pens. Miss Elling, of Sutton Parva, had the first prize, and her birds were by far the best. *Game*, Any other variety, five pens. One good one of Brown-breasted and the prize Duckwing cock was a nice bird. *Cochins*, four pens. Mr. W. Bowley, Cirencester, first prize, and Miss Julia Milward second, in both cases good birds.

Next came the *Hamburghs*, and here was a great improvement, there being fourteen pens instead of the four only of last year, ten additional of the best egg-producers. The first prize in both Silver-pencilled and Silver-spangled went to Mr. Hulbert, of Chippenham, and both were good pens. In Golden-pencilled and Golden-spangled Mr. Maggs, of Telbirt, was first. *Polands*, three pens. Mr. J. Hinton, of Hinton, took first prize with an excellent pen of Silver-spangled; and Mr. Hulbert, of Chippenham, was second. Next we had eight pens of Any other distinct or cross breed. Mr. J. Hinton won first with his *Brahmas*. *Bantams*, Game, five pens. Mr. Renny, of Chippenham, had the first prize with a charming pen of Black-breasted Reds; the hens were particularly good. Mr. E. Cambridge was second with birds of the same kind nearly as good, the cock perhaps even better. In *Bantams*, any other variety, three pens, Mr. Cambridge was first with Blacks. Thus there were eight pens of *Bantams* in a show consisting of just one hundred pens. Well, the tiny pets came off not amiss. I shall soon think that the poultry world is beginning to agree with an enthusiastic Bantam fancier, who declared to me that "they were the most profitable of all fowls, for they ate nothing and produced abundance of eggs." This is better than the *ex nihilo nihil fit* of one's school days. *Turkeys* one pen, the very good ones belonging to Miss Milward; but because there was no competition only a bounty of ten shillings was given instead of the prize. Was this quite fair? *Geese*, four pens. *Ducks*, Aylesbury, five pens, good. Rouen, six pens,

very good. Any other variety, four pens. In this class Mr. G. S. Sainsbury, of Devises, took first prize with an excellent pen of Blacks.

Last of all came Sweepstakes for the best Game cock, fourteen entries, and only one superior one of the whole fourteen—viz., the prize belonging to Mr. R. Elling, of Sutton Parva. Of the rest there was one good one, which was highly commended; its owner was Mr. Henry Stevenson, of Chippenham.

Such was the Chippenham Show—a pleasant little Show always. The visitors were numerous, and the ladies as usual left the fat pigs to themselves (by the way, why is not a pint of eau de Cologne sprinkled each hour over these creatures?) and any male who stood long in front of a pen, as I frequently did, was in danger of having his calves rasped by crinoline, and, what was worse, being considered very much in the way.—WILTSHIRE RECTOR.

MURDER AMONG DUCKS.

I KEEP my poultry inside a wired yard, from which they can get in or out of their houses at pleasure. Amongst them I have Aylesbury and Rouen Ducks, and some time since having a few Muscovy Ducks I put them into the same place, when the latter were attacked one night by some animal and killed, the blood being sucked through a deep hole in the neck. Since then the other Ducks have been unmolested, but having got a few more Muscovy Ducks a day or two since I again left them in the same yard, and this morning I found three of them killed and three others wounded. This time an Aylesbury was attacked as well, and its feathers gnawed off in a singular manner. All the dead Ducks were killed by a wound in the neck, but those wounded had their feathers gnawed off. The question I wish to ask is, Do you think that there is any particular odour about the Muscovy which would attract a weasel, as the hole in the neck leads me to suppose that he was the robber, although the gnawed back and feathers point to some other vermin?—AN OLD SUBSCRIBER.

[There is, unquestionably, a peculiar smell about Muscovy Ducks, but we have never heard that it attracted vermin.

Ducks do not make wounds or suck blood, but their fighting is always by biting at the back of the neck, and they continue to do so till all feathers are gone, and it is bleeding. A new comer on the pond would be likely to be thus treated by the old inhabitants, and such an one would be an easy prey to any vermin.

If not previously injured, a weasel would hardly overcome a Muscovy Duck, as she is strong and would take to the water.]

BRAHMA POOTRAS.

So much has been written in the Journal (which I take in regularly), on the subject of the origin of Brahma Pootras, that I feel I must add my little experience on the subject. So long ago as 1848 or 1849, a friend sent me some eggs which he called "Malays." The chickens, however, proved to be not "Malays," for they had feathered legs. It was before the rage for Cochins commenced, so I only kept one pair, and that more out of respect for the friend who had given me the eggs than from any particular fancy that I had for the "new breed;" for such I really considered them to be.

From that pair I had one particular hen that had not only the feathered legs, but also the vulture-hook. I considered her something out of the common way, so preserved her eggs. From her I bred fowls varying in colour, and also in characteristics. One cock I sent to the Crystal Palace Show, where he was much admired, and I was told that if I had had pullets to show with him I should have gained a prize.

The birds I have now, all arising from this original pair, are decidedly Brahma Pootras; are very hardy, excellent layers, gentle in temper, and good mothers. They vary, however, much in colour, but are chiefly white, with black hackle and tail, are tall handsome birds, and are generally more or less vulture-hooked.

If this will in any degree help your readers to the settlement of the vexed question of the origin of Brahma Pootras, I shall be happy. My own opinion is, that they are a mixed

breed, but by selecting and keeping only the best specimens they will, ere long, become a decided breed.—A. G.

P.S.—The bird shown at the Crystal Palace I have still (stuffed), he having died shortly afterwards. He was white, with black hackle and tail, vulture-hooked, and feather-legged.

If I cannot give any further information I will reply to any notice among your answers to correspondents with which you may favour me. One thing I must add, that my birds do not crow with the prolonged howl of the Cochins.

SATINETTE PIGEONS.

I HAVE noticed in one of your Numbers the remarks and opinions of Mr. B. P. Brent respecting the Satinettes, which breed I only have imported in this country, and I bred those so successfully exhibited in almost every show in England for the last two years. I now possess the original imported birds with other young ones of them, by far superior to those exhibited and so much praised.

Allow me now to inform Mr. Brent that the Satinettes are quite a distinct variety in their native land, where I have seen them in large numbers as much as fifteen years back, and there are three different varieties in colour, and I possess all the three. The thoroughbred Satinettes ought to be with feathered legs, and cannot be had with cap at all. I hope Mr. Brent will be satisfied after this, that the Satinettes are quite a distinct breed and far superior to Turbits with which they will not hold any relations.—H. NORR.

NOTES BY AN OLD FANCIER AT THE SOUTHAMPTON BIRD SHOW.

In the first place the foreign birds and stuffed specimens were a show in themselves, and well worth a day's journey to see. I certainly expected to see more Canaries and British birds. The latter were very scarce; and I think too much is charged for entry, seeing one prize is only given, and that of a very small amount. Of course, I heard much grumbling—amongst disappointed exhibitors, I suppose, but I could see plainly, that some of the awards were unfairly made, and will give some of the cases in which I dissent from the decision of the Judges.

The Clear Yellow and Clear Buff Norwich justly received the prizes given them. The "worst" bird in the Norwich Variegated Buff received first prize, whereas Mr. Walter, of Winchester, and Mr. Mackley, of Norwich, ought to have had first and second. The Gold Lizards were a nice class, but No. 82, which ought to have had first prize, was only highly commended. In the groups of Norwich, too, the prizes should have been reversed. Mr. Walter's birds were a better colour than those of Mr. Mackley. The greatest mistake, I consider, was made in the Clear Yellow Belgian Class. The "best" bird in the class, or in the Show, only received a high commendation, and it must have been very annoying to the exhibitor, Mr. Triggs, of Landport, to have been passed over. A different result will ensue if these birds meet at any other show, and I hope they may. I am not singular in my opinion, for I met many old and respected fanciers at the Show, and we compared the birds together; among them were Mr. Judd, of London, no mean judge, and many others whom I read of in your columns; and last, though not least, was one of the respected Judges of the Crystal Palace Bird Show, Mr. Moore. The prizes should also have been reversed in the Belgian groups. I could only see "two" birds in the first-prize cage; whereas, "three" were in the second cage. I am afraid there was not enough time allowed to the Judges to do their work properly, for at this time of the year it is dark till a late hour in the morning and the exhibitions generally open about twelve.—RICHD. TAYLOR, *Portsea, Hampshire.*

OPEN DRIVING.

DURING the past autumn I have driven bees very extensively without confining them in any way, somewhat in the manner advocated by "J. W. G. C." in page 372 of the last Volume of THE JOURNAL OF HORTICULTURE, but omitting

the use of forked sticks, or any apparatus whatever except a fumigator, two empty hives, an empty bucket, and (for convenience) a couple of kitchen chairs.

My mode of operating has been as follows:—The bucket having been firmly planted on the ground, at a short distance from the colony to be operated on, a few puffs of smoke from the fumigator are blown into the entrance. When the bees retire the hive is slightly raised from its floor-board, and some whiffs of smoke blown under it from all sides. It is well, after doing this, to allow the stock to stand undisturbed for about a minute, so as to allow the bees to commence filling themselves with honey. The hive is then raised altogether from its place, and steadily inverted on the pail, when, having been covered with one of the empty hives, the whole pile, bucket and all, should then be placed on one of the kitchen chairs at a little distance, the other empty hive taking the place of the full one, in order to amuse the retiring bees. A stout carpetpin, or a hairpin, having been stuck into the outside edge of the full hive, opposite the ends of the combs, in order to prevent the empty one from slipping, I seat myself on the second chair, keep one side of the empty hive raised at an angle of nearly 45° with my left hand, whilst I rap the full one with my right, keeping a sharp look-out under the uplifted hive for the ascending queen.

After practising this system with upwards of a score of condemned stocks, I have come to the conclusion that it is, on the whole, slower than close driving, whilst, on the other hand, it has the advantage of affording a better chance of securing the queen during her ascent.

It is all very well for an old stager like myself, who experiences no more ill effects from a bee's sting than from the prick of a pin or needle, to practise open driving without protection for either face or hands; and it is, without doubt, very amusing to witness the admiration and astonishment of the uninitiated spectators; but to the inexperienced I would offer a word of warning and advice, and that is—never attempt open driving without the protection of an efficient bee-dress and gloves. Most bees are unquestionably taken by surprise when the matter is well managed; but this is not invariably the case, and in one misadventure, with a wide-awake colony, you may chance to receive such punishment as will make you regret neglecting the precautions recommended by—A DEVONSHIRE BEE-KEEPER.

DEATH OF A QUEEN.

WILL you, if possible, answer the following question? A dead queen has been picked up from before a strong hive (stock). Fearing the consequence, I shall gently smoke them, turn them out, and examine for a queen. If I find one, well and good; if not, I shall unite them to the next hive. I have taken the precaution to bring the hive into a milder temperature for a day previous to operating.—JOHN NEWLAND.

[The death of the queen may have occurred from natural causes, or she may have been killed by her own workers, or may even have fallen a victim in single combat with a young queen, which is sometimes, although very rarely, hatched under the most inexplicable circumstances, as related by Mr. Woodbury in page 157 of Vol. V., New Series.

In either case it will be advisable to unite the bees to the next stock; but the utmost care should be taken to remove a young queen should any such chance to exist, and for this reason—she might very possibly be victorious over, and dethrone the prolific and rightful monarch of the hive into which she is introduced, which misfortune would ultimately prove fatal to the entire colony, since, at this season, she could not obtain impregnation, and must, therefore, perforce remain a virgin, and turn out a drone-breeder; should she survive until the spring.]

JUMPING COWS.

LOOKING over the index to THE JOURNAL OF HORTICULTURE of the day, two or three weeks ago, I saw with delight a reference entitled "Jumping Cows," and following it up found that some farmers' club or other great authority, proposed as a tried and successful method of taming these over-

active members of society, to cut their upper eyelashes, which they, or he, affirmed to have done successfully with oxen and steers. Now, we have a cow whose habits are so highly gymnastic, that she not only clears fences with extraordinary agility, but attempts to stand on her head on the other side. Of course, the experiment was too easy not to be tried at once, and for a week or ten days we watched the cow and blessed THE JOURNAL OF HORTICULTURE. But, alas! yesterday, finding only an iron-hurdle fence between her and an alluring bit of garden, a promising crop of Brussels sprouts proved too much for her feelings, and—over she went.

Now, Mr. Editor, will the want of eyelashes make her proof against every other temptation except Brussels sprouts? Or can you suggest any more successful mode of bringing active and greedy cows to reason? If so, you will oblige your constant reader and some time correspondent.—COCHIN.

[Well do we know the temptations held out by Brussels sprouts, and well do we know a gardener's feelings when he finds a cow ruthlessly stripping the stems. So when we read in an American journal that the preventive of such raids was so simple, we hastened to reveal it to our readers. (Ah, "COCHIN," "BRAHMA POOTRA" will say, it is only like that other Yankee tale about myself.) However, our correspondent may effectually restrain the gymnastics of her cow within permissible bounds by either hanging a piece of sacking before the eyes of the cow so as to prevent her seeing directly before her, but not to prevent her looking on the ground, or a tether may be strapped from the fore foot to the hind foot on the same side.]

PRESERVING BACON.

WHAT are the requisites for keeping bacon and hams? Are they best kept sown up in bags, hung up, or on racks—where there is much air or little? What degree of heat? Is it a good plan to put them in boxes filled up with malt combs?—R. B.

[I can best reply to these questions by drawing upon our seven years' experience in this house, upon the subject of bacon. The only time the fly troubled us, was when the flitches were put into bags; hence we have never used bags again. We hang the flitches on hooks built into the wall, on the side of the kitchen on which is the fire. It is an airy kitchen, having three doors in it. We put a piece of stick an inch or more in diameter between the flitch and the wall, this secures a current of air at the back. The heat though much tempered by the airiness of the kitchen, must be considerable in a place where cooking is daily done for a large family. By the way, in summer the flitches are hung up in the entrance to the kitchen, for there the temperature is lower. I dine occasionally with a friend who has his bacon kept in a box filled up with malt combs, but although I eat his fowls, I shun the bacon that accompanies them on the table, for it is always bad.—WILTSHIRE RECTOR.]

OUR LETTER BOX.

BIRMINGHAM PRIZE LIST.—Captain W. Hornby took the second prize in adult Dorkings, and not Sir J. D. Wanshope, as stated in our list of last week.

HENS EATING EACH OTHER'S FEATHERS (J. C. L.).—It usually arises either from improper food, as flesh, which gives an unnatural appetite, and if withheld causes them to eat feathers as the nearest substitute; or from dry, hot, stimulating food, which produces a fevered state of the inside. The treatment is the same in both instances. Ground food slaked with cold water, plenty of grass and lettuce if to be had. Rub the bare spots with compound sulphur ointment.

CHOICE OF POULTRY (Yorkshire).—Continue to keep your Dorkings running about, and have some Spanish, Cochins, or Brahmas to shut up as layers. They will do well in a very small space.

BLACK INDIAN DUCKS (Cochin).—The bill of the Duck should be black. That of the drake dark, nearly black, with a yellowish tinge underneath. The legs should be as nearly black as possible, the only deviation being an orange tinge. The latter is not desirable.

ASTHMATIC CANARY (P. M., Nottingham).—Your Canary is evidently suffering from asthma. Tar water has been found beneficial. One gentleman strongly recommends rice water. The last case I had was cured by giving Spanish liquorice in the bird's drinking water, and the bird is now as healthy and vigorous as ever. Flowers of sulphur is not injurious to the birds. The little work on the Canary and British Finches has been published some time, and can be had free by post from the office of this Journal for nineteen stamps.—B. P. B.

THE TIMES BEE-MASTER (Ortlo).—We are obliged by the note on his classical errors in other publications, but they are such as we must avoid in our columns.

WEEKLY CALENDAR.

Day of M th Week.	Day of Week.	DECEMBER 18-19, 1864.	Average Temperature near London.			Rain in last 37 years.	Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock after Sun.	Day of Year.
			Day.	Night.	Mean.	Days.	m. h.	m. h.	m. h.	m. h.	O.	m. s.	
13	Tu	<i>Aphelandra surantiaca</i> flowers.	46.4	32.5	39.5	21	0 af 8	49 af 3	33 4	31 8	15	5 21	348
14	W	PRINCE CONSORT DIED, 1861.	46.9	33.8	39.3	19	1 8	49 8	34 5	31 8	15	4 52	349
15	Th	<i>Greenkneches</i> congregate.	46.1	34.5	40.3	16	2 8	49 3	38 6	13 0	16	4 23	350
16	F	Great storm of 1814.	45.6	34.4	40.0	13	3 8	49 3	42 7	46 9	17	3 54	351
17	S	Sir Humphrey Davy born, 1779.	45.9	33.6	39.8	18	4 8	49 3	48 8	15 10	18	3 25	352
18	Sun	4 SUNDAY IN ADVENT.	45.0	33.9	39.9	19	5 8	50 3	52 9	35 10	19	2 55	353
19	M	<i>Chaetoches</i> congregate.	44.6	33.5	39.1	16	5 8	50 3	54 10	0 11	20	2 25	354

From observations taken near London during the last thirty-seven years, the average day temperature of the week is 45.6°, and its night temperature 33.7°. The greatest heat was 62° on the 16th, 1849; and the lowest cold, 18°, on the 15th, 1848. The greatest fall of rain was 1.24 inch.

POTATOES.



SOME fourteen years ago I was asked by a countryman of mine, a Suffolk farmer, to dine with him. On parting with my friend he gave me a general invitation. "Come," said he, and dine with me whenever you like—stand on no ceremony, for I have always a change for dinner,—pork and cabbage to-day, cabbage and pork to-morrow." I well remember my friend was in despair about the Potato, and our argument for and against the ever-to-be-desired esculent waxed long and rather loud; but both of us were bachelors, so the word "Hush!" never had any occasion to become impressed upon us to restrain our volubility. The old housekeeper did not interfere beyond a few smiles, as I expounded to my friend my system of cultivating the tuber, and my confidence of corporeal sustentation from that particular produce up to the natural term of my existence. I sent him some samples for seed, and the result was that eventually my friend included Potatoes in his bill of fare. Poor fellow! he is now gone to that "bourne from whence no traveller returns to tell a tale;" and I am left to repose on my laurels with so much of vanity as an obscure grower of Potatoes may feel himself entitled to lay claim to, and once more through the genial medium of these pages make my annual bow, in order to detail my proceedings with my favourite vegetable.

I planted thirty-four varieties (not including seedlings), of the Potato in the spring of this year, nineteen sorts only of which do I think it worth while to give an account of. Inquiries are often made by correspondents for the Potatoes most suitable for particular modes of cultivation: therefore I purpose to divide my subject according to the wants of different cultivators, and so enable them to know at once the sorts most suitable for the frame, the orchard-house, the garden, and the field, giving those kinds precedence which are in my estimation worthy to stand first.

THE FRAME.

No. 1. *Mitchell's Early Albion Kidney*.

No. 2. *Sutton's Racehorse*.

These two sorts are scarcely distinguishable apart. They make small glazed haulm, are good croppers, of excellent flavour, and both attain the desirable quality of firmness of tuber at an early stage of their growth.

No. 3. *Shutford Seedling* (Round).—A diminutive glazed topper, precocious, a good cropper, of excellent flavour, though having the undesirable property of producing too many little ones. I am not aware that I carry the appearance of a Potato, but I constantly find

No. 184.—Vol. VII, NEW SERIES.

myself discoursing about the tuber with entire strangers most unaccountably; and I well remember the information I gained as to the origin of the above. Some years ago, as I was journeying by rail from London to Woodstock, a substantial farmer-looking person and myself having enumerated to each other our approved sorts, I came to speak in praise of an early Potato I had met with a year or two before called the Shutford Seedling. My fellow traveller agreed with me, and, curiously enough, he said that he was then about promoting some kind of testimonial to the worthy man who raised it, who, he said, was the parish clerk of the village of Shutford, near Banbury.

THE ORCHARD-HOUSE.

No. 4 is a round early Potato. A sample was sent me this spring to prove against my early English kinds by Mr. Thomas Hogg, Coldstream, N.B. For orchard-house cultivation I do not know any kind which would be more appropriate. As an early Potato for the garden, and in regard to its freedom from eyes, handsome good-sized tubers, and weight of crop, it is a great step in the right direction; and we have no Potato in cultivation that can beat it for flavour, though, like our best earliest sorts, it has a yellowish cast of flesh. As to its keeping properties, I can say that the tubers I received from Scotland last March were in condition for table, and some of my produce on this 29th of November is as good as it can be. It has a rich, unique, moderate-sized top, soon disposed to droop and hug the ground—too spreading, I fear, for frame work. It produces a profusion of pink-coloured flowers, and every blossom gives a berry: consequently they should be picked off in their infancy, unless it be determined to preserve some for crossing with, to which purpose I intend to devote a few, for I predict it will prove a good kind to cross with the pollen of some of the best of our English white-fleshed second early varieties.

No. 5. *Walnut-leaved Kidney*.—A well-known Potato, which bears a larger top and tuber. It takes rather longer to arrive at maturity, and does not produce so many tubers to a root as Nos. 1 and 2; nevertheless, it is a good kind, very nearly allied to them.

No. 6. *White-blossom Ashleaf*.—This variety produces but a few fine Kidney Potatoes to a root, and on that account will doubtless long remain a favourite. It is the best kind to forward by preparing its young shoots, one "spurt" generally becoming a monopoliser, which before planting can be made to attain substantially a length of 5 or 6 inches, by placing at this time of the year the tubers in twilight, in single layers, in a temperature of about 60°, to be then planted in large flower-pots, rough boxes, or many other descriptions of utensils. These may be placed in out-of-the-way corners into which light and sun can penetrate, for the plants to produce. It requires to be nearly ripe before it is up to the mark in flavour, and I consider it inferior in that respect to the sorts mentioned above. It produces rather tall tops with but little and crumpled foliage and white blossoms. Just

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favour it with moisture and ward off the frosts, and it will cater for itself easier than most kinds. It would suit orchard-house culture well.

It would occupy too much space to give the particulars of the above in detail from my note-book, but on referring to it I find that the best roots from the earliest diggings averaged from half a pound up to 2½ lbs. on the 19th of July, when the six kinds growing side by side were quite ripe and taken up. Mr. Hogg's Coldstream Potato then gave 2½ lbs. to a root repeatedly, but none of the others exceeded 2 lbs. for their best roots. In one instance a single tuber of the former weighed half a pound. I said last year that I intended to grow my early Potatoes for the future in beds; but I have kept to the ridge and trench plan as being most suitable for this ground, which is much shaded by the trees from Blenheim Park.

THE GARDEN.

No. 7. *Daintree's Seedling* (Round), Second Early.—This first-class Potato yielded me per acre this year, on an average, rather more than 16 tons, or 225 sacks, at 3 bushels per sack, when grown on the ridge, each ridge or row being removed 42 inches, or exactly between the sites of the rows where I grew the same sort last year, that patch of ground having been now seventeen years under Potato culture.

No. 8. *Daintree's Newest Seedling* (Kidney), Second Early.—I have this year given this Potato a fair trial, and with me it proves to be as like the Lapstone Kidney as Sutton's Racehorse is to Mitchell's Albion. In their flavour and appearance in the dish when cooked, I cannot distinguish the one from the other. In the character of their haulm when growing they are exactly alike, though I must say that with me they "run out" more uneven in tuber than the Lapstones; and even that excellent kind is by no means to be praised in that respect. I shall carefully select the handsomest tubers for seed, which will tend to counteract the tendency to grow of all shapes. I cultivated four square yards of ridge with this seedling, and it gave nearly 27 lbs. weight of tubers. Others, I believe, have it on trial, and I hope to have their reports. I intend to continue to grow it, for, given an equal quality in two Potatoes, it is always preferable to propagate the newest bred as being better able to stand out against the ills that the Potato is subject to.

No. 9. *Lapstone Kidney* (Second Early).—Produce about 15 tons per acre. This is the kind that I have previously depended upon as my latest and best keeping sort. I have a fine sample of them.

No. 10. *Fortyfold* (Round Mottled Blue), Second Early.—Quality first-rate; it is fit for table only up to the new year. It is the best of all Potatoes for mashing. It never cropped better with me than it has done this year. It is a very old favourite of mine, though I dare not grow it largely owing to its being so liable to disease. I am happy to say that I have not met with a single tuber in that condition this year.

No. 11. *Jackson's Seedling* (Scarcely a Second Early).—This is an excellent long-keeping Potato, more delicate to eat than even the Lapstone, not being quite so harsh-dry, if I may coin the word; but its growth of top though handsome is extensive, and it flowers profusely and is very much disposed to berry, both of which circumstances are drawbacks when space and time are limited. It is pear-shaped, and much upon a par for bulk of cropping with the Lapstone.

No. 12. *Fluke*.—There are many spurious kinds of this Potato about, as it is an excellent mother, and it has been largely and indiscriminately propagated from. I believe that I have the true Fluke. It has a dark spare foliage, a meagre top, with blossoms mostly disposed to berry. It is a very useful sort in the event of the disease occurring early, for being a late hardy Potato, it is then likely to escape it, otherwise it is no particular favourite of mine for the table. I have been publicly found fault with for calling it a coarse variety. I have it as good as it can be this year, but as a cropper it is not what it used to be. The first four of these were taken up on the 20th of August; the latter two on the 12th of September.

THE FIELD.

No. 13. *Sutton's Finest Regent* (Round), Late.—This is an excellent Potato of its class. I singled it out two years

ago from a number of sorts at Messrs. Sutton's Seed Establishment, at Reading. It is an improvement I think on all its numerous relations, being not so deep-eyed, and in shape rather oblong than round. It is not quite so acrid in its farewell upon the palate as most Regents are. It throws up in this garden a monstrous top unmistakeably Regent in appearance. Its average was with me between 16 and 17 tons per acre, and every poor man who can should procure it.

No. 14. *Freebearer* (Late).—This is a large, mottled-coloured, ugly Potato, and eminently suitable for a poor man's patch of ground. It produces very few small tubers, weighs heavily in the scales, quickly fills the measure, and its flesh is white, rich, and good. This and the following four sorts with other field varieties, I could not find room to cultivate to any extent, for their tops in this ground become in size like Hazel bushes, so I confined their culture to three large sets of each kind, merely to find how the results tallied with my previous observations, as to which of the sorts I considered the best for a field. When I write *field*, it must be understood that the kinds I recommend for that off-hand culture, would also prove suitable for any light poor garden ground where the finer descriptions of Potatoes do not answer in cultivation. The three roots of the above produced 23 lbs. weight of tubers.

No. 15. *Prolific* (Late).—A very good-flavoured white Potato and ugly. The three roots weighed 22½ lbs.

No. 16. *Gryffe Castle Seedling*.—For features and properties like the last. The three roots weighed 24½ lbs.

No. 17. *Walker's Regent* (Late). The three roots weighed 13½ lbs.

No. 18. *Scotch Rough White*, is as its name implies. The three roots weighed 13½ lbs. The last three sorts enumerated are some of those which I received in the Stewarton bee-hive (of which I hope ere long to tell a tale), which was sent to me from Scotland two years ago by a still unknown friend. I have discarded the other kinds, but these three I always hope to keep for remembrance.

No. 19. *Negro*.—A dark blue, flavourless, large, oblong Potato, suitable for the pigs and an immense cropper. I could not decide how it came about, but two out of the three of these roots gave way in midgrowth. At one we counted 113 infantine tubers, and at the other 131! The third root arrived at maturity and gave 16 lbs. in weight, and that is the heaviest root of Potatoes I ever grew.

THE FUTURE.

I have eight new seedling Potatoes selected out of fifty, and of which I have a good opinion at present, but which another year's cultivation may induce me to scatter to the winds. Unless a person is careless as to what rubbish he brings into cultivation, I scarcely know any kind of propagation which requires more care, observation, time, and patience, than raising a first-rate Potato. From its first impregnated blossom to its appearance satisfactorily on the dining-table it takes at least four years to do it properly, and supposing ninety-nine seeds to germinate out of one hundred, after the years spent in constant attention, possibly not one of the progeny out of the whole batch will be found worthy of perpetuation. Poor Beaton, whom I have never ceased to regret, used to say, that it was "easier to grow Pine Apples than a good Potato now-a-days." I should say that it is easier to do so than to raise a new variety. Thirteen out of my fifty seedlings I had sent me by my unknown friend from Scotland. They scarcely weighed an ounce when I received them in a small envelope, and they were stated to be seedlings from the Fluke. I had thirty-seven seedlings of my own and of the same age, the produce of the pollen from the stamens of Jackson's Seedling, dusted on some pistils of the Fluke. Now, out of these, after three years coaxing, I have only eight worthy of another year's trial, four out of the thirteen from Scotland, and four from my own, and if two of them turn out what I consider Potatoes ought to be before they are recommended to the public, I shall consider myself fortunate. I forward you samples of the eighteen kinds above enumerated in order that you may prove them by tasting, and state if you please whether you consider the ridge-and-trench plan still continues to produce tubers with flavour quite up to the mark.

—UPWARDS AND ONWARDS.

EARLY PEAS.

At a time when public and private enterprise seem determined to leave nothing untouched that there seems any chance of improving, it is not to be wondered that Peas have also come in for their share of the universal progressiveness, which whether real or ideal is constantly at work. Unfortunately, every assumed advance does not prove to be so, and now and then an absolute retrogression takes place; but, on the whole, progress is made, or what is almost an equivalent thereto, a backward tendency is prevented by the movements of those whose efforts are directed to the improvement of the varieties of fruits and vegetables so numerous put forth year after year. That Peas have been no exception to this rule I need hardly affirm. On the contrary, each returning season adds one or more kinds to the class of early ones, and two or three, perhaps, to that of general croppers. On the latter section it is not my purpose to make much comment at present, but I will take the former as possessing claims to attention which cannot be overlooked by even the most careless of cultivators. It will, therefore, be no waste of time to examine the conditions which favour earliness in this vegetable, as well as to name some of the kinds most suitable in this respect.

In the first place let us take a survey of the district which has the reputation of furnishing earlier Peas than others equally favourably situated as regards latitude and local shelter, and one of the main features which constitute early maturity will be at once apparent. Some few years ago I visited a nobleman's gardener who had an extensive kitchen garden as well as other grounds to manage. The kitchen garden had the reputation, and deservedly so, of being one of the best in the neighbourhood; it comprised an area of some six or seven acres, and had good walls all round, and one or two crossing it in a transverse direction, with external shelter on the west, north, and east sides, while the soil was of a kind that produced some of the best vegetables and fruits in their season, and the whole was well managed. Of course, early Peas were always aimed at, the various modes by which they are expected to be obtained adopted, and all the new kinds sown which are every year offered; but the gardener candidly told me, and the admission did him honour, that one of the tenants on the estate always gathered a dish of Peas in the open field earlier by four or five days than he could from the garden, although he had adopted the most approved methods of obtaining them. He had planted them on a south border, and had tried the various methods of autumn and spring sowing, and planting out in various ways; but the result in six out of seven years was always in favour of the farmer.

Now, this may raise a doubt that something was wrong, though the garden was really a good one. The walls produced good Peaches, and the open quarters excellent vegetables, Strawberries, and other small fruits, and skill and good cultivation were everywhere visible; but Nature had denied the garden the means of maturing a crop of Peas early in the season. The soil was heavy, stiff, and cold, useful qualifications for a summer garden, as the general crops testified by their good appearance, but adverse to the winter and spring growth of such vegetables as have to make their growth then—as the Pea has to do. I need hardly say that the garden was well drained in so far as mechanical means could accomplish that object, there being no stagnant water for artificial conduits to take away, neither had good cultivation left anything undone to secure the speedy sinking of rain water. The subsoil was stiff, an excellent qualification by-the-by for nine-tenths of the crops cultivated in the garden, taking everything into consideration; but, as before observed, adverse to the early maturity of Peas, while the soil which possessed the contrary qualification was deficient in most of the properties which rendered the other so serviceable in many ways—for instance, that of retaining moisture to supply the wants of vegetation in the dry weather of the dog-days. The soil which produced the early crop alluded to was of a light gravelly nature, resting also on gravel, which would drain off every drop of moisture which fell on its thin covering, and at the same time carry away those fertilising matters which might be artificially applied. In fact, a dry gravelly soil, which in local phrase is described as a hot burning one in summer, was the soil which pro-

duced the early Peas, beating those on the gardener's south border. From such ground London is supplied with basketfuls of early Peas at a time when they are far from plentiful in places equally favoured in all other respects than those of soil and subsoil.

It being shown that a dry, open, stony soil is the best to furnish early Peas, it follows that unless a soil of this kind be at command, an early crop cannot be depended upon, unless expensive operations be undertaken to imitate it, and such being seldom convenient, those having a stiff, cool soil must rest satisfied, that though unable to furnish Peas as early as their neighbour, they will most likely gain on him in summer Cauliflower, Lettuce, and many other things, as well as in the prolongation of the main crop of Peas. Something, too, may perhaps, be done to encourage the early maturity of Peas in unfavourable places, by adding large quantities of sand or sandstone shatter, if it can be had, to the stiff soil; and as much of the latter material as can be procured, put in the bottom of the trench, would do much towards improving the drainage, and increasing the power of the surface soil to absorb the heat of the sun in early spring. Manure, too, is less wanted for the early crop than for later ones, early maturity rather than prolonged growth being the object. It likewise happens sometimes that means taken to check growth are not without their benefit. Thus cutting the roots of Tomatoes in autumn checks the growth of useless vine, and hastens the maturity of the fruit, and in like manner where slates or flagstones are plentiful, a few laid along under the row check the downward tendency of the roots, and the plant being compelled either to send its roots farther for its food, or hurry on its functions, the latter being the more easily accomplished, a few days are gained in the crop. The soil should also be lighter than the surrounding medium, the row raised above the general level into something like a ridge, the slate or stone bottom but slightly depressed from the surface, and all the growing material raised above it. Observe, I by no means affirm that this method will insure success in all cases, but in some it may be beneficial, and is worth a trial.—J. ROBSON.

(To be continued.)

FUMES OF CHARCOAL AMONG PLANTS.

CUCUMBERS IN DUNG-BEDS—WINTERING COLEUS BLUMEI AND VERSCHAFFELTI.

I HAVE a lean-to house 40 feet by 10 feet, but not heated, and in it I am obliged to keep all my bedding plants through the winter, and if a sharp winter some of the tenderest of them are severely cut, if not entirely killed. Do you think the fumes of charcoal would injure the plants at all if used merely to exclude frost? As that would, I suppose, be the only thing I could use, would it be injurious to heat the house with it a degree or two above freezing?

When would be the earliest time I could sow Cucumber seed with any hope of success? I should grow the plants on dung hotbeds, and should like to commence as soon as possible. I suppose the Improved Sion House is the best for early forcing.

I had a fine lot of healthy young plants of the Coleus Blumei and Verschaaffelti, in three-inch pots in a cold greenhouse, but am afraid I shall lose them all, as several of them are already dead, and the others are dying off; the points of the shoots mildew, and the stems rot off, although they are kept almost dry. Would you tell me how I could winter these pretty plants?—A YOUNG GARDENER.

[Burning charcoal in an unheated greenhouse will always be injurious in proportion to the closeness of the house, and the nature of the plants. Some leathery-leaved plants, and even soft-leaved ones like the Scarlet Geraniums, will stand much more than any others. Merely to heat a degree or two above freezing, is rather close sailing, unless you stay beside your charcoal pans all night. Would it not be better for such a nice house at once to purchase one or two small iron stoves, which you might do for from 30s. to 35s. each, with a funnel to go outside? The advantage of two would be that you would never require to make either of the stoves very hot. If the house is not lofty, one fair-sized brick Arnott's stove would answer to keep out frost, and a pan of water on the top would give a nice moist atmosphere. We need say

nothing of a flue, or hot water, but it is a pity to trust a house of such a size full of bedding plants to the mercies of charcoal, unless, indeed, you burn it in a close vessel, with a small funnel to take off the fumes.

We presume you cannot cover the roof of your house thickly; and if you cannot do so, nor yet use heat, then the best plan for keeping plants in such a house would be the following, which we have several times adopted, when we could get no heat. The plants instead of being set on stages were placed in beds—say 4 feet wide, on the floor of the house, with 15 inches of a passage between the beds. A few sticks or wires were hooped over the beds of plants, which were kept rather dry all the winter. The roof would keep out a little frost. When more than a few degrees were expected, a mat, or a cloth of any kind was thrown over the hoops, and when the frost became more intense still, a few inches of rough hay, or dry litter was thrown lightly over the cloth or mat. Plants can be much more easily kept in such a house so heated, than in any mere cold pit or frame. If anything like attention is paid, the plants will scarcely ever suffer from damp, and all the attention necessary for them can always be given under cover of the roof. We have no doubt that in an unheated orchard-house, great quantities of plants may so be kept. We thus preserved many last season, and without a cloth, by merely using clean dry litter. If that dry material is turned over frequently, it will keep out much frost. All outside coverings lose their protecting power in proportion as they become wet and dense. Once we had a lot of fine plants on stages in such a house as our correspondent's, and an unexpected frost of a three weeks' duration having set in, the plants were saved by being all collected under the stage, and the stage covered round and over with cloths and matting, and when the thermometer under the covering fell to 34°, then 4 inches of litter was placed all over. The plants remained thus shut up until the frost was gone, and suffered much less than they would have done had frost been kept out by pans of burning charcoal.

As to the time of sowing Cucumbers for fruiting in dung-beds, you may commence directly, if you can obtain dung enough to carry you on. In sowing, you may have a bed fully 3 feet in height, and from 12 to 18 inches larger all round than the frame. A one-light box will be as good for this purpose as a larger. The plants will then be advancing whilst you are preparing material for your fruiting-bed. With covering up you should be able to command 70° of temperature. We need not say that the heat must be sweet, which you will know if the condensed moisture on the glass is as clear as dew drops. For a good bed to carry you through the spring and summer, it would require to be at least 4 feet high at back, and 3½ feet in front, and to keep the air inside dry and sweet, we prefer banking up litter to the top of the frame all round. Much of the success will depend on having a dry or waterproof covering. When in our young days we used to grow Cucumbers in winter and spring in dung-beds, we liked to have double sashes to use when we wished, and also for the purpose of changing the sashes when they became at all dirty. This was easily managed by having two-light or three-light frames, two at least of one size. It was only during the worst months of the year that we found changing the sashes advisable. Instead of attempting to clean a sash in use, it was taken off in an instant, and a dry clean one put on as quickly. With plenty of manure, sufficient labour power, and an extra amount of care and attention, Cucumbers may thus be grown early as well as by hot water; but constant attention must be given to keep up the temperature, and a wholesome atmosphere.

You will not succeed in keeping *Coleus Blumei* and *Verschaffelti* in your cold house. If you heated the house you might keep them by having a box made in which to place the plants, with a hand-light, or a large square or two of glass over it. By some means you must give a rather dry temperature of from 45° to 50°. We think you may keep them in your living-room more easily than in an orchard-house. An amateur kept a lot last season according to our directions. The plants were small, struck in August, and potted in three-inch pots; others were struck about the end of September, four or five round the sides of a four-inch pot, and were left in the cutting-pots all the winter. He

had for these and similar things two rough boxes, made 18 inches deep, and 2 feet square, a bottom of zinc was placed 5 inches from the bottom of the box, the place beneath had putty placed all round the sides at the joints, and then the whole below the zinc was well tarred, and done time enough to dry well before being used. A simple plug-hole was left at the top and bottom for pouring in hot water, and letting it off when cold. Little bits of wood for placing the pots on were set inside, and the top of the box was covered by two squares of glass laid on. In severe weather the glass could be covered. When more severe still a little hot water from a teakettle would heat the enclosed space through the zinc, and the bits of board free of the zinc prevented the pots being over-heated. Something of the same contrivance would do in the cold house, but, of course, it would be more easily looked after in a dwelling-house. Such little boxes, rough or elegantly made, would also be valuable to amateurs for propagating.—R. F.]

ROSES SUITABLE TO THE NORTH OF ENGLAND, IRELAND, AND SCOTLAND.

THE article on pillar Roses for a conservatory (page 110), has been read in Ireland, and acknowledged by a distinguished countess; and I have thought that it might be of advantage to the northerners of England, and also to persons living in Scotland and Ireland, if I gave a list of hardy, excellent, free-blooming Roses suitable to their circumstances.

As their countries are either cold or humid, their summers short, and their winters severe, I advise them to get some of the Roses named beneath, on the hardy, quick-growing *Manetti* stock. Those in italics are rather for ornament than show. Those to which an asterisk is prefixed may not open well in humid cold seasons, or late in the season, unless they are under south walls. The Roses recommended are equally good for all parts of England.

SUMMER ROSES.

WHITE.—*Madame Zoutman*, *Madame Plantier*, *Triomphe de Bayeux*. FLESH-COLOURED.—*Mad. Audot*. VARIEGATED.—*Madeline*, *Tricolore de Flandres*. ROSE-COLOURED.—*Charles Lawson*, *La Ville de Bruxelles*, *La Volupté*, *Paul Perras*. DARK CRIMSON.—*Boula de Nanteuil*, *Frederick II.*, *Triomphe de Jausseus*. BLUSH.—*W. Tell*, *Queen of Denmark*. CRIMSON.—*Paul Ricaut*, *Kean*, *Napoleon*, *D'Aguessseau*, *Chénédol*, *Brennus*. PINK.—*Coupe d'Hébé*, *Charles Duval*. PURP SLATE.—*Schismaker*. Moss Roses, *Crimson*, *Laneii*, *Baronne de Wassenäer*.

OBSERVATIONS.—Have two sets of these. Cut back one set early, and do not remove them. Remove the other set later in the spring, and cut them back later. This will prolong the bloom. They are all hardy, beautiful, free, and abundant bloomers, and many of them quite distinct and as yet unmatched by autumnals. They will all make pole Roses if desired, and are equally good on the brier and *Manetti*. Those who give them up "commit (to use an expression of Talleyrand), a blunder worse than a crime."

AUTUMNAL ROSES.

WHITE.—**Acidalie*, *Mrs. Bosanquet*, *Sombreuil*, *Mad. Alfred de Rougemont*, *Mad. Massot*. ROSE-COLOURED.—*Anna de Diesbach*, *Anna Alexieff*, *Cecile de Chabillant*, *John Hopper*, *Duchess of Sutherland*, *La Ville de St. Denis*, *Baronne Prevost*, *W. Griffiths*, *Louise Odier*, *Reynolds Hole*, *Baron Gonella*. BLUSH.—*Caroline de Sansal*, **Souvenir de la Malmaison*. VERY DARK CRIMSON.—*Prince Camille de Rohan*, *Duc de Cazes*, *Vicomte Vigier*, *Lord Macaulay*, *Mrs. W. Paul*, *Alfred de Rougemont*, *Princesse Mathilde*, and *Richard Smith*. CRIMSON, RED, SCARLET, PURPLE, OR SHADES THEREOF.—*Charles Lefebvre*, *Senateur Vaise*, *Jules Margottin*, *Général Jacqueminot*, *Maréchal Vaillant*, *Triomphe de Paris*, *Géant des Batailles*, *Pauline Lanzeseur*, *President Lincoln*, *Peter Lawson*, *Madame Boutin*, *Mrs. C. Wood*, *Madame C. Joigneaux*, **Madame Julie Daran*, *Professor Koch*, *Beauty of Waltham*, *Madame C. Crapelet*, **Monsieur de Montigny*, *Eugène Appert*, *François Lacharme*, *Duchess of Norfolk*, *Souvenir de C. Montault*, *Madame L. Carique*, *Mrs. Elliot*, *Pius IX.* YELLOW.—*Gloire de Dijon*. For a South Wall.—*Solfaterra*, *Triomphe de Rennes*, *Celine Forestier*, *Mlle. Aristide*. BUFF.—*Bourbon Queen*.

The above are what I recommend. The following are magnificent and very hardy, but I cannot tell whether they would open in the north of England, Ireland, and Scotland:—Maurice Bernardin, Duc de Rohan, Anguste Mie, Souvenir de la Reine de l'Angleterre, General Washington, and Duchesse d'Orleans. Those with an asterisk had better be put near or close to a south wall. As regards the preceding six people must please themselves.

If you intend to have a large rosarium, the proper way to begin is to have 100 each of Jules Margottin, Senateur Vaisse, Cecile de Chabillant, and Charles Lefebvre, and others in proportion. Instead of heaps of varieties, accumulate fewer and really good sorts. Subject to the observations made, I am sure that the persons for whom the selection is made could not make a disappointing collection.

One word to "Loch Ness." Acidalie is a very strong grower; Triomphe de Lyons and Dr. Bretonneau are bad growers; Celina is only fit to bud upon; Anguste Mie must be taken up annually, and have the roots cut back. In strong lands Manetti Roses should be root-pruned annually *in loco*, or be taken up and root-pruned. They will then give their flowers, and be less likely to run blind.—W. F. RADCLIFFE, *Rushdon*.

SEEDLING MEDLARS.

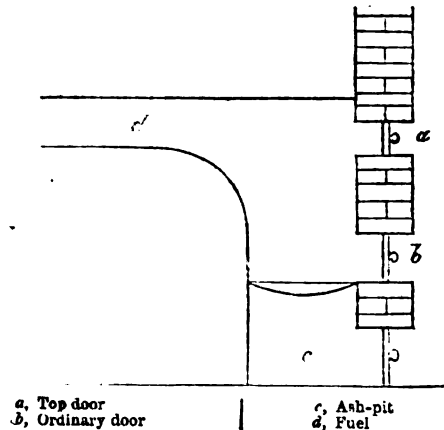
I SHOULD be glad to learn from some of your numerous readers if they have ever succeeded in raising Medlars from seed. I have often examined the stones, but have never been able to find any kernel in them; yet in spite of that I have sown them, and waited one or two years, hoping that a perfect seed or two might have escaped me, but no plant has ever made its appearance. I enclose a few seeds taken from the Nottingham Medlars, of a full size, and quite ripe. I confess to being quite at a loss to account for this kind of fruit, a native of our climate, not maturing its seeds.—*MASPILUS*.

[Gartner says that the stones of the Medlar are one-celled, the cell containing two seeds, one usually abortive; the other is obovate, compressed, whitish, with a brown spot near the top. Miller says that if the seed be taken as soon as the fruit is ripe, and be sown the same autumn, the seedlings appear the following spring. We never tried thus to propagate the Medlar, and shall be obliged by any one informing us of their experience.—*EDS.*]

A VINERY FURNACE.

I AM about to give you a little of my experience, and in return, at the conclusion, ask a little of your advice. In April, 1864, I built a small vinery 17 feet wide and 22 long; a pit in the middle 4 feet wide and 10 long; flues round the pit, with an air space between them and the pit wall; the said air space coming over the flue at the hottest part from the outside, as mentioned in one part of the last volume of the Journal; all made as there stated, except that over the fire-grate the flame can rise up to the top of the flue; and opposite the flue end is a door, from which, down to the grate, may be 3 feet. I have an ash-pit door to regulate draught; there is also a furnace door at the proper place; the fire door is opened, and the fire made, in the usual way. When the fire has burnt up I close the proper fire door firmly, and open this at the flue end, and then fill the fire-box any depth with coke or cinders, which I can then regulate to burn any number of hours under twelve. I fancy the furnace heats economically, but as it has not been used in forcing I cannot as yet well affirm that this is the case. Now, between the pit and the front of the house is a border 4 feet wide, 3 feet deep, 1 foot stone and concrete, then soil from turves, mortar rubbish, and a few bones. In it were planted on May 17th seven Vines, their roots only covered 3 or 4 inches. No. 1 Vine, Black Hamburgh, grew 3 feet; wood ripe now, and leaves all off; but this is just at the end of the house. 2nd Vine, Black Hamburgh, only grew a foot; wood ripe, leaves off. 3rd Vine, Black Hamburgh, grew 7 feet; wood ripe, leaves yellow. 4th Vine, Muscat Hamburgh, grew 6 feet; wood ripe, leaves on. 5th Vine, Purple Constantia, 3 feet; wood

ripe, leaves partly off. 6th Vine, Bidwell's Seedling, grew 3 feet; leaves partly off, ripe all but the end. 7th Vine, Royal Muscadine, grew 8 feet; wood ripe, and leaves yellow.



All the Vines were 3 feet 6 inches apart except the Muscat Hamburgh, and it is planted close to a Black Hamburgh. Some of the Vines had half-inch wood when planted, the others three-eighths; of the new wood none exceeded three-eighths. Now what am I to do to these Vines—cut them down to two or three eyes? The front rods are 4 feet long, and all eyes are rubbed off, as the place is 4 feet 6 inches to rafter bottom, and the house is 15 feet high at back. Any further advice will be very acceptable to me, as I am a new beginner. Some of the eyes are very small, the others pretty prominent. I have Sanders on the Vine.

Will you tell me how to get a stock of bedding plants without obtaining too much from the nurseries, as that is expensive?—W. W., *Northallerton*.

[Your construction of furnace is excellent, and the top door for feeding the furnace must be a handy and a cleanly mode of feeding, besides acting on the slow-combustion principle. It is a move in the right direction. For the future good of the Vines we would cut them all back to two good eyes about the middle of December, and when they pushed select the strongest shoot, rubbing the other off. There must have been unaccountable reasons for the poor growths made; ours, planted in the eye, shot out to a length of 20 feet.

You do not say what kind of plants you wish to get a stock of, nor the kinds at present in hand; but if you give us the names of those you have we will tell you how to obtain a stock from them. Once you have the sorts there is no necessity to go to the nurseries except for new sorts, and to repair misfortunes.]

INTERRUPTION OF BOTTOM HEAT.

I HAVE just built a small stove, with two pipes for top heat all round, and two four-inch pipes under each bed for bottom heat. The pipes are in a chamber covered with slates, upon the slates are a few inches of broken bricks, &c., and then a bed of leaf mould, full of sticks and very rough, for about 18 inches in depth; in that I have plunged the pots, but I find I can get very little bottom heat, not nearly enough for propagating, and sometimes the soil even feels quite cold, and yet the top pipes are quite hot, and the temperature of the house is between 70° and 80°. Do you think any other material than leaf mould would be better? The leaf mould is also full of worms, woodlice, and many other insects. If I retain the leaf mould, how can I best get rid of the worms? Would tan or cocoa-nut refuse be better than the leaf mould in respect to letting the bottom heat penetrate? From the bottom pipes to the surface of mould is about 2 feet.—S. E. H.

[There is no doubt that your top pipes for heating the air of the house act efficiently. Have you felt the pipes in the chamber to see if they are equally hot? because if not, there is something to be done to secure a free circulation in

the chamber as well as in the exposed pipes. If these chamber-pipes are hot enough, then there is nothing wrong in the heating. These chamber-pipes will be most efficient in heating the slate if placed not far from it. If the pipes are hot, and yet the slate does not become so, open a few holes, say a couple of inches square, in the bottom of the chamber communicating with the air of the house, passage, &c. Lime or salt will destroy the worms in your leaf mould; the former will be the safest, as salt in excess would injure your plants and cuttings. Cocoa-nut refuse will save you from the worms, but it will be as bad a conductor of heat as the rough leaf mould, and if it become dry at the bottom will keep all the heat about the slates. Instead of this 18 inches of rough leaf mould, use some 5 or 6 inches of sand or roughish ashes, and if the slate becomes hot they too will be so. For all tender things, however, for which you require extra heat, you should have a glass hand-light, &c., to place over your cuttings, as that will keep the heat from radiating. From 80° to 90° will be high enough for the tenderest.]

ROSES BUDDED ON THE BLACKBERRY.

I HAVE tried this and the buds did not take (see page 456). I have budded Maurice Bernardin on the Sweet Briar this summer; it has taken and made wood.—W. F. RADCLIFFE, Rushton.

ROYAL HORTICULTURAL SOCIETY'S FRUIT, VEGETABLE, AND ROOT SHOW.

THIS, which was termed an "International Show," commenced on Wednesday last, and terminated, so far as perishable fruit and vegetables were concerned, on Saturday last; but the other objects will remain till the 16th. There were upwards of eighty classes in the schedule, but as no money prizes were offered—merely certificates bearing a money value according to the receipts—in many of the classes there was little and in some no competition. The Show, nevertheless, was a large one, and the display made by the Apples and Pears, of which it was principally composed, was very extensive and good, and served in some measure to compensate for the small quantity of hothouse fruit shown. Not only did they closely fill a range of tabling running almost the whole length of the conservatory, but they extended into both the adjoining arcades.

Though there were classes for collections of fruit from fruiterers and private growers, Messrs. Webber & Co., of Covent Garden, were the only English exhibitors. Their collection was well arranged for effect, and consisted of a noble Smooth-leaved Cayenne Pine Apple in the centre, two others of less size, two Black Jamaicas, and two Queens, Black Hamburgh and Muscat Grapes, Prickly Pears, Tangerine Oranges, twelve splendid specimens of foreign-grown Uvedale's St. Germain Pears between 8 and 9 inches long and 6 in diameter, and weighing collectively 29½ lbs.; Catillac, Easter Beurré, and Glou Morceau, very fine; Reinette du Canada, Calville Blanche, and Gloria Mundi Apples, Pomme d'Api, Matthews' Eliza Pear, &c. The merit of this fine collection was recognised by a first-class certificate.

PINE APPLES were very poorly represented as regards numbers. By far the best were two noble Smooth-leaved Cayennes, from Mr. Ingram, gardener to Her Majesty at Frogmore, each weighing about 7½ lbs. A Black Antigua, of 3½ lbs., from Mr. Neale, Banbury, was second, and a Smooth Cayenne of 3 lbs. 12 ozs. from Mr. Wallis, Astle Park, third; a Black Prince, of 7 lbs. 6 ozs. coming also from the same. The best Queen was one of 3 lbs., from Mr. Heather, gardener to R. Pulford, Esq., Thames Ditton.

GRAPES were very good for the season, but the exhibitors were few. There were only two of White Grapes, Mr. Tillyard, Bentley Priory, who was first; and Mr. A. Ingram, Highgrove, Reading, second, both having large, regular bunches of Muscat of Alexandria, large in berry, and beautifully ripened. Of Black Hamburgh, both in the class for six, and in that for three bunches, Messrs. Lane, of Berkhamstead, were first, with fine bunches, large in berry, and well coloured; and Mr. Hill, Keele Hall, whose name is a guarantee for the quality, second; Mr. Frisby, Sleaford, third. Bunches cut from the large Vine at Cumberland

Lodge, were again shown on this occasion by Mr. T. Ingram. In Any other Black kind, fine bunches of West's St. Peter's, from Mr. Tillyard, were first; and Barbarossa, from Messrs. Lane, second; Lady Downes', from Mr. Frisby, third. Messrs. Lane likewise exhibited fine baskets of Black Hamburgh, Barbarossa, Black Prince, and Esperione, in the Miscellaneous Class.

PEARS, both of dessert and kitchen kinds, were numerous, and the former comprised many fine examples of Glou Morceau, Easter Beurré, Chaumontel, Beurré Rance, Passe Colmar, Winter Nelis, Vicar of Winkfield, &c.

For twelve dishes, Mr. T. Ingram was first, with Prince Albert, Chaumontel, fine and highly coloured, as indeed were most of the others in his collection; Easter Beurré, Shobden Court, Glou Morceau, Vicar of Winkfield, Knight's Monarch, Groom's Princess Royal, Jean de Witte, Winter Nelis, Moccas, and Passe Colmar. Mr. Cox, gardener to W. Wells, Esq., Redleaf, who was second, had likewise an excellent collection, the fruit set out upon Ivy leaves, and which comprised Baronne de Mello, Old Colmar, Joséphine de Malines, and others already named. Mr. Lumsden, gardener to Lady M. Hamilton, Sleaford, was third.

In the class for six dishes the competitors were more numerous. Mr. Tillyard was first with Chaumontel (finely coloured), Passe Colmar, Beurré de Rance, Glou Morceau (very large and fine), Easter Beurré, and Joséphine de Malines. Mr. Phillips, gardener to J. Barton, Esq., Pontefract, was second; Mr. Ford, gardener to W. Hubbard, Esq., Horsham, third. Several collections in this class were for various reasons disqualified, and among them one from I. Corbière, Esq., Cerisy Belle Etoile, Normandy, which contained fine examples of Uvedale's St. Germain, a kitchen Pear, under the name of Belle Angevine, Easter Beurré, very fine, but in duplicate, and Colmar des Invalides.

In three dishes Mr. Beasley, Twyford Abbey, Acton, was first with good fruit of Chaumontel, Glou Morceau, and Easter Beurré; Mr. Earley, Digwell, second, and Mr. A. Ingram third. The best single dish was Glou Morceau, from Mr. Ford; and Beurré Diel, from Mr. Westbrook, was second.

The heaviest five came from Mr. Murray, gardener to the Rev. D. Williams, Tring Park. The kind was Glou Morceau, very large, but the weight was not stated; next came Chaumontel, from Mr. Plester, and, third, Glou Morceau, from Mr. Phillips.

In kitchen Pears the best single dish was Catillac, fine, from Mr. Ross, gardener to C. Eyre, Esq., Newbury; large and fine Uvedale's, from Mr. Scrymger, were second, and the same kind, from Mr. Cox, third. In no case did the weights of these dishes appear remarkable.

APPLES were very numerous, and in some of the collections very fine. For twelve dishes Mr. T. Ingram was first, having, amongst others, Blenheim Pippin, Gipsy King, an Apple of his own raising, a good keeper, and of excellent flavour; Court Pendu-Plat, Ribston Pippin, Claygate Pearmain, Rosemary Russet, Old and Scarlet Nonpareils, and Fearn's Pippin. This was a very fine collection, and many of the fruit were highly coloured. In the latter respect, however, those from Mr. Cox, of Redleaf, were the most remarkable; several of them were naturally high-coloured varieties, and, ripened in the fine climate of Kent, they were almost dazzling, and threw a ruddy glow around them. They consisted of Brabant Bellefleur, Col. Vaughan, Baddow Pippin, Golden Winter Pearmain, Ribston, Blenheim, and Cox's Orange Pippins, Scarlet Winter Pearmain, Sturmer Pippin, &c. This collection, and that from Mr. Betteridge, Milton Hill, Stevenston, were equal third; excellent collections from Messrs. Lane, St. Mary's Cray, and Mr. Ford, being second. In six dishes Mr. Betteridge was first, Mr. Kaile second, and Messrs. Lane, St. Mary's Cray, third. In this class were shown fine examples of King of the Pippins, Court Pendu-Plat, Fearn's Pippin, Adams' Pearmain, Scarlet Nonpareil, Loan's Pearmain, and Spanish Pearmain, bearing considerable resemblance to the Blenheim Pippin, but stated to be distinct from that kind, being earlier and keeping longer. There were several other good exhibitions in this class. In three dishes Mr. Betteridge was first with King of the Pippins, and Blenheim and Ribston Pippins, of good size, and finely coloured; Mr. Ford second, with Golden Reinette, Blenheim and Herefordshire Pearmain; and Mr. Bentley and Mr. Kaile third. The best single dish for flavour was

Cox's Orange Pippin, from Mr. Hall, gardener to Captain Tyrrell, R.N., Acton; the same, from Mr. Plester, was second, and Blenheim, from Mr. Ford, third.

In kitchen Apples the exhibitions were numerous and good. The varieties consisted of Blenheim Pippin, Gloria Mundi, both of very large size, Alfriston, Mère de Ménage, Dumelow's Seedling, Yorkshire Greening, Waltham Abbey Seedling, Rymer, Bedfordshire Foundling, New Hawthornden, Glory of Kent, Beauty of Kent, and other approved sorts. For twelve dishes Mr. Betteridge was first, Mr. Cox second; for six, Mr. Betteridge first, and Mr. Parsons, Acton Green, second; for three, Mr. Ford first, and Mr. Betteridge second; and for a single dish, Mr. Plester first, with New Hawthornden; Mr. Wells second, with Blenheim, very large. The heaviest five Apples were Gloria Mundi, from Mr. Lumsden, Sleaford; Alfriston, from Mr. Young, Highgate, second.

MISCELLANEOUS FRUIT.—In this may be included a very extensive collection of Apples from Nova Scotia, which were also exhibited in competition with English growers. Among the sorts exhibited were excellent examples of Gravenstein, Ribston Pippin, Gloria Mundi, Emperor Alexander, King of the Pippins, Blenheim Pippin, Esopus and Flushing Spitzenberg, Red Baldwin, and other American sorts. Altogether the collection was such as did credit to the colony, and served to show that for Apples at least the climate is well suited. Mr. Hardie, gardener to the Viceroy of Egypt, was likewise an exhibitor, his collection being of a tropical character. It comprised Pomegranates of the largest size, two large bunches of Dates, which would have presented a better appearance had they not met with an accident on the journey; Citrons, Lemons, Shaddocks, various kinds of Oranges, Custard Apples, fruit of the Papaw tree, *Paidium pyrifera*, and Medlars. A large collection of Belgian Pears was likewise added to the Show on Friday, as well as a collection of fruit from M. Chevet, of the Palais Royal, Paris, comprising large specimens of Uvedale's St. Germain Pears, White Calville Apples, two large Capsicums, &c. Baby Castle Currants, in excellent condition, were shown by Mr. Ford, and Red and White Dutch by Mr. Tivey and Mr. Curd; the latter also showing Medlars and a Bromham Hall Melon. A good dish of Cuthill's Black Prince Strawberry was likewise exhibited, as well as some Quinces and *Impératrice* Plums.

VEGETABLES, ROOTS, &c.—Of these there was a tolerably large Show, and the articles exhibited were generally good. The best collection of Potatoes, comprising twenty-five sorts, came from Mr. Curd, gardener to M. Thoyts, Esq., Reading. In it we noticed Webb's Imperial Kidney, Daintree's Earliest, Champion China (a pink-eyed sort), Fox's Seedling, Flukes, and Dalmahoy. Mr. Campbell, Winorick Hall, near Warrington, was second with Flukes, Scotch Dons, Arrowsmith's Seedling, Pink-eye Kemp's, Oxford Reds, and others, in all twenty sorts. For Kidneys Mr. Frisby, gardener to H. Chapman, Esq., Sleaford, was first with Brighton Albion, Jackson's Superb, Myatt's Superb, Early White Kidney, England's Glory, and Lapstone, the last very fine. A fine large kind, called Prince of Wales, was sent by Mr. Veitch; and Mr. Taylor, Hunton Bridge, had a fine dish of Huntingdon Kidney. In Round kinds Mr. Moffat, gardener to Viscount Maynard, Dunmow, was first with Pheasant's Eye, Painted Lady, Early Shaw, Early Tenweek, Transell's Seedling, and Dalmahoy, all sound and good. Mona's Pride, from Mr. Budd, was very good; and a tuber of a Scotch Potato, grown at Eccleshall, and weighing, when dug, 2½ lbs., was exhibited by the Rev. C. P. Good. From Mr. Spary, of Brighton, came 268 tubers, the produce of a single small white Potato, showing its extraordinary productiveness. But as we are promised some remarks on this portion of the Show by our worthy correspondent, "UPWARDS AND ONWARDS," we will leave further remarks on the Potatoes in his hands.

Onions consisted of White Spanish, of which good examples were shown, James's Keeping, Silver Skinned, and Danvers' Yellow. Of Carrots Mr. Curd exhibited some of extraordinary circumference; and of Parsnips the Hollow-crowned and Student were well grown, clean, and of good size. In Beet, Pine Apple and Nutting's were the chief kinds; the latter, from Mr. Frisby, was first. In Turnips Mr. Ingram, Frogmore, and Mr. Ford, were first, White Stone, Orange Jelly, American Red-topped Stone, and Sutton's Early Six-

weeks being the chief kinds shown. Good roots of Salsify came from Messrs. Earley, Kaile, and Curd; and of Scorzonera from Messrs. Drewitt and Ross; and London Flag Leeks, of large size, from Mr. T. Ingram, Mr. Budd being second with Musselburgh. Chinese Yams, large and fine, and fine sticks of Horseradish, were shown by Mr. Tillyard; good roots of the former also coming from Mr. Cruickshank and Messrs. Sutton.

Of Peas there were only two exhibitors—viz., Mr. Frisby and Mr. Tivey; the former had *Ne Plus Ultra*, the latter Carpenter's Express. In Celery Wall's White Invincible and Ivery's Nonsuch from Mr. Hall were first in the White and Red classes; and of Endive, Green and White Curled, Moss Curled, and Batavian were shown by Messrs. Veitch, Frisby, and Earley. Of Cabbageworts excellent Savoy's were shown by Mr. Budd; also by Messrs. Ingram and Frisby; and of Brussels Sprouts, those grown by Mr. Earley from home-saved seed were as fine as could be desired. Roseberry and Dalmeny Sprouts were also well represented. Of Cabbage the best was Early Dwarf York from Mr. Ford, and very good it was. Next came Fearnought, from Mr. Budd; and, third, Lochart's Rosette Coleworts, from Mr. Ingram, and which seem to have the property of forming a nice firm heart. Some good Broccoli was also shown by Messrs. Budd, Ford, and Frisby.

Of miscellaneous vegetables Cardoons, now seldom seen, came from Mr. Veitch; Mushrooms from Messrs. Moffat, Budd, and Ingram; Dwarf Kidney Beans and Telegraph Cucumbers from Mr. Mobbs; Asparagus from Mr. Curd; Sea-kale from Mr. Earley; and a handsome new *Lagenaria* from Natal was contributed by E. Stuart, Esq., of Nice.

In the same arcade with the vegetables Messrs. Sutton, of Reading, have a fine stand, extending 70 feet in length, the centre being formed by a glazed case, containing a thousand different kinds of seeds of grasses, forage plants, trees, shrubs, vegetables, annuals, &c. On each side of this centre are wings, in which examples of various grasses, large specimens of agricultural roots, and Gourds are exhibited; and the whole is tastefully decorated with Pampas Grass. There is also an interesting collection of Potatoes. Mr. Veitch likewise exhibited a collection of Potatoes, Parsnips, some remarkably fine Turnips, Swedes, and Mangolds, grass seeds, Chardon Cattle Potato, &c.

Lastly, preserved fruits and pickles were shown by Messrs. Fortnum & Mason, of Piccadilly, and Burgess & Son, Strand.

FLORAL COMMITTEE, DEC. 7.—On this occasion Mr. Veitch had a first-class certificate for *Manettia* species, a pretty twiner, with bright scarlet flowers; and E. J. Gray, Esq., Exeter, had a similar award for *Asplenium palmatum cristatum*, with crested fronds, and a very handsome variety. Three or four *Chrysanthemums* were also shown, but received no award.

FRUIT COMMITTEE.—A Sub-committee met at the Garden, South Kensington, on the occasion of the Great Fruit Show, to examine such new fruits as were exhibited. A seedling Pear, name Prince Consort, was received from the Rev. John Huyshe, of Clythydon near Exeter. It is a large and handsome Pear, in shape somewhat resembling a very large Marie Louise or Van Mons Léon le Clerc. One specimen was as much as 5 inches long and 3½ inches wide. The skin is yellowish green; the flesh yellowish, firm, very juicy, and rich, with a sort of Gansel's Bergamot flavour. This received a first-class certificate. A seedling Pear was received from Mr. H. Muggleton, gardener to Hon. G. W. Milles, Lees Court, Faverham. It bore a close resemblance in shape to the Broompark, a seedling raised by Mr. T. A. Knight, but it was far inferior to that variety, and was not considered a desirable kind. Another seedling Pear was received from Mr. Matthews, of Clapham, under the name of Matthews' Eliza, which was recognised as being identical with Groom's Princess Royal, a variety raised and distributed many years ago by the late Mr. Groom, of Clapham. M. Grégoire, of Jodoigne in Belgium, sent a collection of seventy-one varieties of seedling Pears, not any of which were considered to possess any merit. One, intended as a compliment to the Assistant Secretary of the Society, was named Andrew Murray. It was coarse-grained, dry, harsh, acid, and peculiarly disagreeable, and the Committee were of opinion it could never be of any service. Mr. Thomas

Short, gardener, Clewer Park, Windsor, sent a seedling Melon, which for so late in the season possessed a great deal of merit. It was of large size and yellow. The flesh was of dark green colour and very well flavoured.

PRODUCE OF POTATOES.

IN publishing the results of my experiments as to the comparative productiveness of Potatoes, in your Number of November 1st, my sole motive was to elicit from those who had made experiments, the results of their experience in such matters, and to induce others to make trials of various sorts of Potatoes for themselves. I was not weak enough to suppose that all the results of experiments made would agree with my own, because I am quite aware that the relative produce of everything, but especially, I think, of Potatoes, would depend much on climate, soil, &c., and in such a dry summer and autumn as our last on the quantity of moisture obtained, either from dews, or from partial showers. My object, therefore, is in some measure obtained by such information as "AGRICOLA" gives, but when he goes on to say that "some such mistake has insinuated itself into the Prescott experiments, seems certain from this, that the return claimed is altogether incredible," I must, in all courtesy, beg leave to say, that there is no mistake, and can be no mistake in the produce. The "proof of the pudding is in the eating."

I only obtained from Mr. Paterson 14 lbs. of seed of his Blue. That I did get from this seed 618 lbs. of marketable produce, is known to very many. About this there is no mistake, and the best proof I can offer to "AGRICOLA," is to say that should fate or fortune lead him to this neighbourhood, I should be very glad to show him about 600 lbs. of the sort which I have kept as seed for next year.

I may add that I do not know Mr. Paterson; that I have no personal interest in the matter at all; that I was only induced by a Scotch friend to give these new sorts a fair trial, and were I at home (which I am not), I would send for your inspection (Mr. Editor) Mr. Paterson's bill, proving that I only bought 14 lbs. of seed, which I again affirm produced 618 lbs. of Potatoes.—W. W. H., *Knowsley Cottage, Prescott.*

P.S.—Mr. Paterson will probably speak for himself, but, I think, he wrote me word, that some of his experiments on a larger scale had produced even more favourable results.

[There is no need for our correspondent to produce proofs, we have known him many years, and are able to say that his word is quite sufficient testimony to the truth of any fact within his own knowledge.]

That Messrs. Paterson should have obtained at the rate of more than 1400 bushels per acre, intimates that an experiment on a small scale cannot be relied upon as evidence of the produce obtainable per acre, for we fear no Potato will yield 1400 bushels on that space. The first President of the Horticultural Society, the late Mr. Knight, tried many experiments on Potatoes, and he only has recorded his hope that 1000 bushels might be obtained.—Eps.]

SULPHUR v. RED SPIDER.

IN Number of November 29th, a mixture of clay and sulphur is recommended as a paint for fruit trees. Does this act mechanically by smothering the insects? Last year, hoping to get rid of the unpleasant smell in Gishurst due to the chemically combined sulphur, I tried a number of mechanical mixtures of soap and sulphur on orchard-house trees, the proportion of sulphur being so large that the trees were quite yellow after painting. For a time I hoped that the washes had succeeded, but later on, red spider appeared active among the particles of sulphur. It would, therefore, seem that sulphur mechanically mixed has not the same effect as sulphur chemically combined, as in Gishurst.—G. W.

[It is quite true. We have seen red spider as merry as crickets among lumps of sulphur; but we have seen the same thing among dried Gishurst, and every other mixture that we have heard of or tried. We have more faith in the fumes of sulphur from a heated wall, or a hot-water plate,

than from any mere surface application, whether mechanical or chemical. When insects appear on the growing plant, Gishurst water and other mediums will be useful, and if the Gishurst is made with water a day previously, the unpleasant smell will be dissipated. For mere painting deciduous fruit trees, so as to smother up all insects' eggs, clay paint is as good as any, and that may be made of any colour with sulphur, soot, and lime, all of which ingredients are unpleasant to insects, though in their mere mechanical condition they will not kill them.—R. F.]

PYRAMID BEDS.

SOME time ago we were promised a description of the pyramid borders at Bentley Priory. As they were again alluded to last week as being very ornamental at Mr. Raikes Currie's new residence, I am induced to beg the favour of a detailed account of the mode of grouping, height, &c., at some convenient and early period. Is the *Geranium Manglesii* the same as *Mangles' Variegated*? if not, please describe it.—Essex.

[As soon as we can we will say a few words concerning Bentley Priory; and, were we to give all the details of the pyramidal beds, not borders, at once, we should only be spoiling the table by removing one of the best dishes. Last year an engraving was given of an avenue of pyramids at Putteridge Bury, and their planting in circles. These were very fair, but they were far behind the pyramids of Mr. Tillyard's at the Priory, which pyramids were of one thing and one colour. The beds at Putteridge, and perhaps at Mr. Raikes Currie's, were themselves considerably elevated. The mere beds at Bentley Priory are flat, the pyramidal appearance being given by the plants alone. The *Calceolaria amplexicaulis* and the *Heliotropes* were magnificent; but, like our old parish schoolmaster, we will not anticipate. Possessed of vast funds of knowledge, he particularly delighted in Rollin's History and Plutarch's Lives; and when, to whet our anxiety, he would give us an outline of the facts, and the philosophy of such a life, he would stop short with—"I must not anticipate!" In the meantime our correspondent may as well save a few old tallish plants if he can. It will require him some years to rival Mr. Tillyard.]

Geranium Manglesii and *Mangles' Variegated* are the same variety. This is generally used in combination; but, when well grown, a massive bed has a splendid effect, with its gossamer feathery-like flowers, which, with the light foliage, produce a charming effect. It is one of those plants, however, that do well in some places without any trouble, and will only do very middling in other places, do what you may.]

MANAGEMENT OF PEACH TREES IN POTS AND MAIDEN TREES.

SHOULD Peach trees in pots be taken out of the orchard-house after the fruit is gathered? My man has plunged mine under a wall in the open garden, and I find others are doing the same; but I see nothing about it in Mr. Rivers's book. Which do you consider right, to keep them all the year round under glass, or turn them out in the autumn? Also, when should they be brought back under glass again?

One more question I should like answered. I have bought about one hundred maiden Peach, Nectarine, and Apricot trees, which I am now having cut down and potted, but I have no room to put them in my orchard-house; but I have purchased a piece of ground where I intend building a residence, and hope to have a large orchard-house there. Now, I want to know whether I can keep these maiden trees (which are now being potted), for two years out of doors, so as to bring them to nice bearing trees by the time my orchard-house is ready, if so, is any particular treatment required? I am having them potted in 11-inch pots now, and thought I could shift them into a size larger next season, and the following season (two years' time), into still larger pots in which they would remain and be transferred to the orchard-house.—J. D.

[Such trees may either be set out of doors or kept in-doors with very good results. In a fine summer like the last, when

the fruit was gathered and the wood about ripe, the trees could be set out, the pots banked-up with litter, choosing as warm a place as possible in front of a wall to perfect the ripening of the wood until the leaves had fallen. After that it mattered little where the trees were placed, unless it was resolved to force them early, and in that case the north side of a wall, to rest the trees, and protecting the roots from extra wet, would be the best place for them. All others may remain in any place after the leaves fall, the pots protected from frost and wet, until the first frost of some 4° or 5°. This out-door treatment not only helps to swell the buds nicely, but also with the assistance of the little frost to get rid of the eggs and remains of insects. We have known plants left too long and much injured by the frost. On the whole then, as one of the chief objects of orchard-houses is the ripening of the wood, as well as the ripening of the fruit, and as the very dryness, easily secured, so much promotes the former, we generally keep our plants in-doors; but as soon as the leaves turn yellow and droop, we place the plants as thick as they will stand, protect the pots with litter, and use the rest of the bed of the house for other purposes. If we had a plant infested with insects, however, we would be apt to give it out-of-door treatment in the autumn.

Instead of cutting down your maiden plants now, we would merely shorten and prune back the side-shoots and pot in 9 or 10-inch pots. These pots should then be plunged into a bed out of doors, or into a shed all the winter, where they can have plenty of air. If out of doors a piece of board or tile should be placed over the pot to keep extra wet from the soil. During winter, if out of doors, extreme frost must be guarded against by protection, and a little tiffany or Nottingham netting, as a protection, will be necessary until the middle of May, so that the young wood may be healthy and kind. This, nipped during summer, as those in-doors, will secure a good foundation, and the chief thing will be to ripen the wood, so that the plants shall have all the sun possible, and little moisture in the autumn. Next winter they should be protected the same way.]

WELLINGTONIA GIGANTEA.

IN some of your back Numbers this year, you furnished your readers with the dimensions of several of the large specimens of *Wellingtonia* now growing in different parts of England; and you requested that other correspondents would forward to you the size of their plants at the end of this summer's growth. I now venture to send you the dimensions of my plant, which was sent here by Mr. Barron, of Elvaston, in 1857, and was at that date 4½ feet high.

Our plant has upon it at this present time fifty-seven cones, each the size of a large walnut, and I think these will prove fertile, as the male and female blossoms were in perfection at the same time during the summer. The male blossom is pink in colour, and Mr. Barron expressed himself much pleased when he saw it and took some away with him, saying he should like to lay it before the members of the Royal Horticultural Society.

I have no hesitation in saying that our plant is as perfect a specimen as can be found in England. Other plants may, perhaps, be somewhat higher, but none can be more perfect in its pyramidal outline. It has not a twig out of place, and the triangle formed by its boughs from top to bottom is as correct as it is possible to conceive.

The circumference of the stem of this plant near the ground is 5 feet. The spread of the branches is 33 feet in circumference. The height of the plant is 15 feet 1 inch.—*R. D., Monk Hopton, Salop.*

ABSENCE OF COTTAGE GARDENING IN NORTH DERBYSHIRE.

IF I had not been from home I should sooner have answered your query as to the reason of cottage gardening having made so little progress in North Derbyshire, at least as far as I am able to answer it.

The truth is there is no obvious reason. Various customs, manners, observances, are seen to prevail in some places, of

which it is difficult to understand how they arose, or why, having arisen, they were confined to those localities. But possibly climate may have had something to do with the neglect in question. Cottage gardening much prevails in Cheshire; but in Cheshire to all the old cottages you almost invariably find attached a small orchard filled with Apple, Pear, and Damson trees. It is almost certain that any one attaching a bit of land to a cottage for an orchard would devote a portion of it to a garden. In Derbyshire you see nothing of the sort, at least in the Peak—no doubt for this reason, that only the coarser fruits will ripen at all, and not those always. For instance: Walnuts grow well, but never harden the shell or produce a kernel; Filberts do badly, and will not always ripen. This severity of climate may have been such a drawback as to discourage instead of stimulate gardening, and cause owners to acquiesce in the idea that it is more profitable to keep the land in grass, for which it is admirable. Perhaps another reason might be suggested in the thinness of the population and fewness of the gentry to encourage such things in a large portion of the northern division of the country.

But whatever may be the reason of the fact, there is no doubt of it, as you observed. We are doing what we can to awaken a better taste by annual exhibitions, but it requires time to bring new habits into the country.—*HUGH FORD BACON, Castleton, Derbyshire.*

TRENTHAM BLACK GRAPE.

I THINK your correspondent Mr. G. Bester only read the last part of Mr. Pearson's article on the *Trentham Black Grape*, or he would never have asked, Has he grown it in a cool house? for Mr. Pearson distinctly says, "In one large orchard-house which covers 300 square yards, I planted a Vine to each of the pillars to see if good Grapes could be grown in Nottinghamshire without heat," and the result of that experiment has far exceeded Mr. Pearson's expectations.

I have not grown it myself, but I have had the pleasure of seeing it twice this year at Chilwell, both in heat and without heat, and in each house the Grapes were a credit to the grower, and would be so to any good Grape-grower. I can fully endorse all Mr. Pearson has said in its favour.

Perhaps your correspondent Mr. G. Bester treats his orchard-house the same as I once saw a beautiful glazed Peach wall treated—it was thrown open every day regardless of the weather. The consequence was small fruit, and not ripe until after that on the open wall.—*T. D., near Newark.*

IVY FOR EDGINGS.

I HAVE not seen the Ivy edgings in the gardens of the Emperor of the French alluded to by "K. M. P.," but many in our English gardens. The way they are made is to form the borders of old rubbish if the soil be wet, otherwise the plants will not withstand the winter, particularly when the more tender variegated kinds are grown. If the soil is light such precautions are not necessary. The plants being at hand—good strong plants, which are mostly raised in, or grown in, pots for a time—are planted out in spring 2 feet apart, watering them until they become established. As they grow the shoots are trained over the surface, and secured in the proper position by pegs. When the shoots meet, or the desired length is attained, they are pegged down, and the points directed towards a vacant space, ultimately there being none. When the surface is entirely covered, the points are cut off, and this makes the border dense in consequence of the number of shoots which arise from this stopping.

The after-management consists in keeping the shoots within their proper limits by going over them frequently, and cutting off those which are disposed to ramble, taking care to train such, if there be any vacant space to fill, in that direction instead of cutting them off, so that an equal surface may not only be obtained but preserved. It is also necessary to clear the border of dead leaves, as these are very unsightly if left to decay on the plants. Every three years or so the Ivy-borders should be cut quite close, leaving, however, a

number of shoots to furnish fresh growths and leaves to cover the surface quickly.

The best kinds for such purposes are the Algerian Ivy (*Hedera algeriensis*), *H. Roegneriana*, and the different forms of *canariensis*; the Gold-blotched Irish, the Marble-leaved, and that known as the Irish palmate-lobed Ivy being very fine. The Slender-branched form of the *Hedera helix*, or *gracilis*, with those other forms of the species of small but close growth, are admirably adapted for training round the basket or wire-work of beds in the flower garden, where they have a fine effect: such are *H. helix Donerailense* minor, and its variety *marmorata*, *Cullis's Silver-margined*, *lobata*, *chrysocarpa*, and *pulchella*.

I shall shortly offer further remarks on these useful plants.—
G. ABBEY.

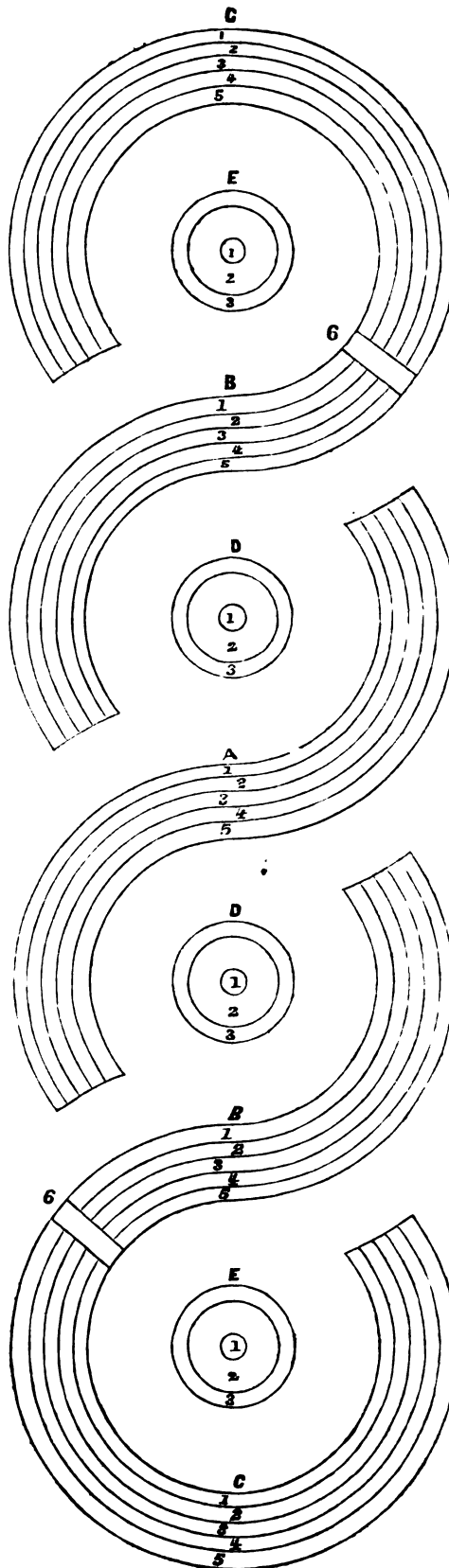
FLOWER-BORDER PLAN.

Will you give your opinion upon the arrangement I have made in the design which I enclose? It is situated in front of the drawing-room windows, immediately under the eye. My employer wishes to have it planted in the ribbon style.—
L. C. H.

[We think your proposed plan will look very beautiful, and your proposed planting cannot be improved on.

We think, however, your dividing your two side-borders by a band across of *Gnaphalium lanatum* will destroy the fine sweep of colour just by dividing it. We think that if you had your circles as now, and the centre broken border as now, and then mixed the outside row of the other two borders with *Koniga maritima*, and blue *Lobelia* all round, and the other lines the same all round, you would not have so much variety, but you would have a far more telling effect. It is a mistake to suppose that mere variety will produce grandeur of effect.]

- A. 1. *Verbena Purple King*.
2. *Geranium Christine*.
3. *Geranium Bijou*.
4. *Geranium Christine*.
5. *Verbena Purple King*.
- B. 1. *Koniga variegata*.
2. *Geranium Tom Thumb*.
3. *Calceolaria Aurea floribunda*.
4. *Geranium Tom Thumb*.
5. *Koniga variegata*.
6. *Gnaphalium lanatum*.
- C. 1. *Lobelia speciosa*.
2. *Geranium Flower of the Day*.
3. *Perilla nankinensis*.
4. *Geranium Flower of the Day*.
5. *Lobelia speciosa*.
- D. 1. *Humea elegans*.
2. *Coleus Verschaffeltii*.
3. *Centaurea candidissima*.
- E. 1. *Humea elegans*.
2. *Centaurea gymnocarpa*.
3. *Amaranthus melancholicus ruber*.



WHITLEY ABBEY.

THE SEAT OF LORD HOOD.

THE curiosity with which all strangers visiting Coventry regard the effigy of Peeping Tom induced me one fine morning in October to saunter forth from the "Red Lion" in quest of him, and, to my surprise, in a niche in the wall at the corner of the street facing the market-place was the veritable Tom in a field marshal's hat. How ridiculous! The general interest excited, even in remote parts of the kingdom, by the processions which occasionally take place at the great or show fair, and in which Lady Godiva occupies so prominent a situation, will plead my excuse for this passing notice.

On the right-hand side of the turnpike road to Whitley Abbey is the new cemetery, which was laid out under the superintendence of Sir Joseph Paxton, the member for Coventry. It comprises nearly eighteen acres. The ground selected for this purpose was exceedingly picturesque in its original state, and its beauties have been further enhanced by the masterly design, and the tasteful manner in which it is laid out. It is only of late years, and since the passing of the bill against intramural interments, that the English people have become, in some degree, familiarised with these picturesque and attractive places of burial, which have been at once the solace and the ornament of continental towns, affording not only a resting-place for the departed and a fitting retreat for sorrowing relatives and friends, but a promenade for the meditative, amidst gardens and alleys that speak of death, but tell their tale in a soothing spirit. It is only at a comparatively late period that we have permitted ourselves in this country any sympathy with those gentle and graceful cares and affecting symbols of lingering attachment which our continental neighbours have long since been accustomed to bestow upon the last dwelling-places of those they loved or respected in life. These testimonies of love beyond the grave—the carefully-tended flowers, the garlands of variously-coloured Everlastings, the handful of freshly-gathered flowers flung upon the tomb, the Snowdrops and Crocuses, in themselves the poetical symbols of "death in the midst of life," as they fade and die away, but no less emblems of a second life and resurrection as they spring forth again after the death of winter—all these graceful and touching evidences of sorrow seeking to find a

soothing vent in garnishing the place where the loved one awaits a second life, were long unknown among us.

Whitley Abbey is about two miles from Coventry. It is a capacious Elizabethan mansion of stone, situated on rising ground. It was here that Charles I. is said to have fixed his station, when, in 1642, he ineffectually summoned the city of Coventry to surrender. The stove and greenhouse attached to the south side of the house, as seen in the accompanying engraving, are 60 feet by 25, supported by pillars covered with *Mandevilla suaveolens*, *Ipomœa Learii*, *Passiflora Buonanaparteæ*, *Bignonia venusta*, *Lophospermum scandens*, and other choice climbers, trained also beneath the roof from which they hang in rich garlands and festoons of flowers and foliage. Smith's Giant Scarlet Geranium covers a large space on the back trellis, and is 25 feet high; there are also magnificent specimens of Punch Geranium, Fuchsias, Camellias numerous and luxuriant, with their bright glossy leaves, and thickly set with bloom-buds, and Japan Lilies in full bloom, with fine healthy foliage. The Acacias are also worthy of notice for variety and good

cultivation. The fine Gloxinias also require favourable notice. In front are flower-beds on grass planted with the usual bedding-out plants—Scarlet Geraniums, Calceolarias, Verbenas, &c. Trained against the house, as seen in the engraving, are large specimens of the White Banksian Rose, Magnolias, and *Glycine sinensis*. In front of the lawn is the lake, and by a tasteful treatment of its boundaries considerable indefiniteness is obtained. At the head of the lake is a natural rockery, secluded, and approached from the pleasure-ground walk; it is composed of arches mantled with climbers, and narrow winding passages, steep and abrupt, canopied and darkened with evergreens. The crevices are filled with Ferns, seedling Azaleas and Rhododendrons, Orchis, Primroses, Foxgloves, and other and more rare sorts of British plants. The masses of Rhododendrons and hardy Azaleas with other shrubs of trailing habit on the rocky margin of the lake, which is varied by indentations and projections, must appear gorgeous in spring when covered with bloom and reflected in the water. The quiet character of the lake, its caverns, and its rockery, combine to make



WHITLEY ABBEY.

this place a scene of picturesque and artistic beauty. It is truly delightful to saunter through these lovely scenes with a mind capable of feeling the beauties and the glories of the creation, displayed in the insects climbing up the spiry grass or disporting on the fragrant flowers; in the scattered fish, of various colours, poised on tenuous fins; in the feathered inhabitants of the grove that make the welkin ring with their sweet music, and in the contrasted wonders of vegetable life, "from the Cedar that groweth in Lebanon to the Hyssop that springeth out of the wall."

In the pleasure grounds are fine specimens of Evergreen Oaks, *Pinus excelsa*, Deodar Cedars, and other Conifers, planted by Colonel Hood, who was killed in the Crimean war, and on that account they give a hallowed and melancholy charm to the place.

The kitchen garden of three acres is some distance from the Abbey. It contains three vineries and a Peach-house, old-fashioned, but in good preservation, with strong healthy Vines and Peaches. The collection of Pears numbers as many as fifty sorts. They are to be seen against the walls, also as standards and dwarfs. One fruit of Léon le Clerc

weighed 12 ozs.; Louise Bonne of Jersey and Easter Beurré were very fine. Plums on dwarf bushes were bearing heavy crops, and the collection of Apples had that yellow, mellow, yet juicy appearance so agreeable to the eye and taste.

The park of 250 acres commands an agreeable prospect over some extent of country, and is adorned with some magnificent Beech and Oak trees; one of the latter measured 15 feet in circumference 3 feet from the ground. "Oaks," says Shenstone, "are in all respects the image of the manly character. As a brave man is not suddenly either elated by prosperity or depressed by adversity, so the Oak displays not its verdure on the sun's first approach, nor drops it on his departure: add to this its majestic appearance, the rough grandeur of its bark, and the wide protection of its branches. A large, spreading, aged Oak is, perhaps, the most venerable of all inanimate objects."

"Mark yonder Oaks, superior to the power
Of all the warring winds of heaven they rise,
And from the stormy promontory tower,
And toss their giant arms amid the skies,
While each assailing blast increase of strength supplies."

The Hon. Mrs. Hood has furnished her drawing-room with models of figures and groups in the various occupations common to each country, and which are generally copied from the *Illustrated London News*. The objects are distinguished for good taste and considerable skill.

"A thing of beauty is a joy for ever.
Its loveliness increases; it will never
Pass into nothingness; but still will keep
A bower quiet for us, and a sleep
Full of sweet dreams, and health, and quiet breathing."

The whole is under the excellent management of Mr. Pond, the head gardener.

WORK FOR THE WEEK.

KITCHEN GARDEN.

PROCEED with former directions as regards manuring and trenching, which are the principal operations at this season. Gravel walks should come in for a share of attention. Sifted coal ashes are an excellent material for the back walks, as it bears the winter traffic well and is always pleasant to walk upon. A coating of this material may now be given if they are in a bad condition. *Celery*, take advantage of the first dry day that may occur if the ground is in a rather dry state, to earth-up closely any that may have outgrown the previous soiling, and be prepared to protect the ridges in case of severe frost. Dry stable litter answers very well for this purpose. *Parsley*, endeavour as far as circumstances will permit, to have a good supply under safe protection, for there is generally a large demand for this, and in the event of a severe winter it is difficult to save it by the ordinary protection of hoops and mats. *Peas*, sow a few more, and *Beans*, as succession crops, drawing earth to the strong of the first sowings. A little dry charred earth is excellent, laying it on each side of the stems. A few branching sticks or spruce fir will defend them from cold cutting winds or severe frost.

FRUIT GARDEN.

It is always desirable to have as much of the pruning and nailing done before the approach of spring as possible. Lose no opportunity, therefore, of forwarding the operations, for besides the advantage of having that kind of work done before the busy season, the garden will present a much neater appearance after the wall trees are nailed, the borders made trim, the small fruit-bearing bushes pruned, and the ground among them slightly forked over. See that the standard trees which have been recently moved or root-pruned are firmly secured against injury from winds, and also let any root-pruning or transplanting remaining to be done this season be executed as soon as possible.

FLOWER GARDEN.

The weather is still favourable for carrying out alterations and where these are in hand they should be prosecuted with the greatest possible dispatch. Planting and the removal of large trees or shrubs cannot be finished too soon, for it is of the utmost importance that the plants should be afforded some chance of making fresh roots before the trying winds of March. See to even small plants being secured against the wind, for these are often injured by being blown about after planting, which a small stake and a few minutes' work would prevent. Procure a stock of *Briars* for budding on next season. Let the roots be well trimmed, cutting back closely the strong ones, for these if left will be of little use save to furnish an endless supply of suckers. As soon as alterations are completed, and the beds and borders are put in proper order for the winter, let a little fresh gravel be put upon the walks if necessary, in order to render them firm and dry for the winter. Plants of a tender habit in the borders should have some litter, sawdust, or old tan spread pretty thickly over the roots, and a few spruce fir or furze bushes stuck round them. Creepers on walls or trellises should now be nailed or tied-in. Those of a tender description should be protected. Examine pillar and trellis *Roses*, and see if the soil wants removing, or the kinds changing. For choice sorts roomy holes should be made, capable of containing three or four barrowloads of well-prepared soil. Turfy loam of good quality is the chief ingredient, to this add a portion of rich rotten manure and, if at hand, a little sandy peat or leaf mould.

GREENHOUSE AND CONSERVATORY.

Chrysanthemums and most of the flowering stock will require frequent attention in watering. The leaves of *Camellias*, *Oranges*, &c., are liable to a dark scum: this should be cleaned away with a sponge at this period especially, as the chief interest among pot plants depends in a great measure on cleanliness, both with regard to the leaves and pots. Take care when frost arrives that the *Heaths* do not become too dry of a sudden. The best preventive of this is to be very shy in applying fire heat. We have already alluded to the ill effects of humidity and stagnant air in plant-houses as evils to be guarded against most particularly at this season, but these are of minor importance compared with one of our own creation, evidence of the existence of which is not unfrequently seen in the drawn and unhealthy occupants of greenhouses—we allude to heat, which, judiciously applied, is, of course, of the first importance, but employed without judgment becomes a fertile cause of the evils above described. It must be borne in mind that a spring or summer temperature, without the sunlight of the one or the other, is altogether an anomalous state of things, and one which cannot be pursued consistently; with things so susceptible of such influences as plants, above all, high night temperature should be avoided. We are convinced of the value of the practice of employing night coverings, and of thus dispensing in a great measure with the use of fires.

STOVE.

Some of the early-ripened tall *Cacti* may now be introduced either in the stove or forcing-pit, and receive a liberal watering to commence with. Do not encourage any fresh growth at this period, rather aim at that kind of management which will serve to consolidate the growths already made and to develop the blossoms of the late-flowering plants in a proper way.

FORCING-PIT.

This is a capital period at which to introduce a considerable bulk of things for genuine forcing purposes. *Rhododendrons*, *Asaleas*, *Persian Lilacs*, *Moss* and *Provence Roses*, *Sweet Briars*, *Honeysuckles*, *Kalmias*, *Daphnes*, *Rhodaras*, the more advanced *Hyacinths*, *Narcissus*, *Tulips*, &c., may now be fairly started. A sweet bottom heat of 80°, and an atmospheric temperature of 65°, will be necessary, whatever the structure. One thing may be here observed, and that is—that it is in vain to introduce anything unless properly set for bloom. This points to the necessity of a special summer's training, as advised in proper season in this calendar.

PITS AND FRAMES.

Look over the plants carefully, at least once a-week, and remove decaying leaves, &c., which, when left, only encourage damp and mildew. See that the frames are well banked up, so as to be proof against any ordinary frost, and do not neglect covering up securely at night.—W. KRANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

CHOSE a dry day for wheeling a little rotten dung on to alleys, quarters, &c., to be used as wanted, reserving the chief of such work for dry frosty weather. Packed up *Carrots*, *Beet*, &c., in sand and dry earth in sheds. Protected *Cauliflower*, earthed-up *Cabbages*, and strewed the ground with dry burned rubbish, especially near the plants, which will alike protect them from severe frosts, and set slugs and snails adrift. If this fine mild weather continue much longer, we will just move up the most forward *Cabbages* intended for spring with the point of a steel fork so as to snap the extreme roots, and then fasten the earth firmly about them. This will check growth, and diminishing luxuriance will render the plants more sturdy for meeting a severe frost. Protected *Artichokes* with some litter round the crowns, which we find had been neglected. Cleared *Asparagus* ground of faded tops and weeds, and covered with a dressing of rotten hotbed dung, consisting chiefly of decayed leaves, the virtues of which will be washed to the roots by rains; but, as stated the other week, summer is the right time for helping the *Asparagus*.

Asparagus Forcing.—Gave plenty of air to *Asparagus* coming on in a common hotbed. We mentioned the other week that we had forced this vegetable in rather too large

quantities for our supply of plants for several years, and we mention it for recommending the practice of having good beds for forcing slightly, at least without the necessity of destroying the plants, which is generally the case when old roots are lifted and transferred to a mild hotbed. Last year we stated how such beds should be made so as to be forced by dung, by fires, or hot water; and how for a little help, a bed may have brick or board edgings, with a pit or narrow ditch round it in which fermenting material may be placed in March. No plan costs less trouble for present supply than lifting the roots, from four to seven years old, out of the beds, and forcing them in a slight hotbed; but then, of course, the roots are of no more use, and, therefore, a constant succession of young beds must be kept up to take the place of the older ones broken up. Thus treated we have had fine heads about Christmas from plants scarcely more than three years from the seed; but generally it is desirable to have the plants older.

One or two inquiries have been made as to the mode of planting such raised plants in the hotbed, and doubts have been expressed as to the possibility of gathering so many heads from such a small space. These doubts would be dissipated if it were recollected that all the good roots and buds were clustered close together, to yield as much as possible in the way of produce, without providing for the produce of another year. We treat these *Asparagus* plants in the hotbed just as some amateurs treat their one or two stools of *Rhubarb* in the open air—by slipping off every stalk and leaf that comes—a good plan for obtaining all the present produce possible, but not a good plan if we expect produce every year. Keeping in view, then, that we wish the bed for its space to hold as much as possible, and that by tree leaves, &c., we have a hotbed which will yield from 80° to 90° of bottom heat, we place all over it some 3 inches of sandy soil and leaf mould. We then begin at the end of a row or *Asparagus*-bed by taking out a trench, and with mattock, spade, and fork undermine the mop-like roots with their crowns, taking care not to break the latter. These will generally be all sound if the bed is young, but some will be rotten and decayed if the beds are old; and such should be removed, as without sound buds and roots there will be no produce. These roots are placed carefully in a barrow and are taken to the bed; and the first row of crowns is placed carefully at the back of the beds, and the long mop-like roots are drawn out in front of them and packed in the light rich soil. The next row of crowns is placed on the top of these roots as near to the first row of crowns as possible, and the mop-like roots drawn forward in a similar manner, and so on until the frame or bed is filled. A slight sprinkling of soil is then put over the roots, a watering given so as to wash in among the long roots, and then a couple of inches of leaf mould or old tan, or any light soil thrown over all. The crop will depend more on the previous treatment and the state of the crowns than on anything we can do to give strength to the plants after they are taken up. Extra heat is the greatest enemy they can meet with, and this can be greatly regulated by the air given. When once the shoots are about fit for use in winter, light and air are necessary for colour and flavour; but too much air must not be given in cold weather, or the shoots will be apt to be hard. Instead, therefore, of giving too much bottom heat, we prefer banking up the sides of the frame, so that we can give more air without greatly reducing the inside temperature.

Though we speak of hotbeds, however, our amateur brethren may have *Asparagus* all the winter, especially after Christmas, in their little greenhouses, or even in their rooms and windows. We have seen it very good in cellars—rather pale in colour, it is true, but much improved by being placed in damp sand for a few days before using, and set in a window, a little film being cut from the bottom of the shoot every morning. The damp sand is better than water. We have also grown it on the floor, and even by the sides and on the top of a fire in a greenhouse, beneath stages, &c., in boxes some 8 inches deep and a foot wide, moving the boxes to the light as the shoots rose some 3 or 4 inches above the ground. We have seen some such boxes very nice, in the window of a clergyman's study, after being forced near the kitchen fire.

It reminded us of the doings of another minister of the

gospel, whose kitchen was a regular forcing-house in winter for bulbs, *Rhubarb*, *Sea-kale*, &c. Enthusiast as he was in everything connected with gardening, these pursuits were engaged in, less from any object of mere self-gratification, than the—(well, it must have been self-gratification, too, though combined with)—the nobler desire, by means of a flower, or a vegetable out of season, to throw some ray of sunshine into the chambers of affliction and suffering. Owing, we suppose, to the influence of a more than meretric warm-hearted kindness, every young girl in the kitchen, instead of grumbling at the trouble, took almost as much interest in the old barrels and tubs that cumbered her domain as her master himself. We have even been assured that the short instructive interviews on such occasions have become the beacon lights to regulate the course of a life journey. Such success, under difficulties, is just a proof of the truth of the old adage, that "Where there is a will there will be found a way."

Sea-kale and Rhubarb.—Took up some more roots, and placed them in the Mushroom-house. Here we have just taken a note out of the clergyman's book. When his *Hyalanthus* and *Tulips*, and *Narcissus*, had filled their pots with roots in the dark cupboard, and begun to push at the top, he used to bring them nearer the fireplace, and, to encourage upright prolongation, place a pot of the same size, reversed, over them, with the small hole in the reversed pot open, except at night. This kept a higher temperature in the atmosphere round the lengthening flower-stem. When the covering-pot got in the way, the pot, with the bulb, was moved to the mantelpiece for a few days, and then to the window. Now, in the case of *Sea-kale*, we think the easiest and simplest of all plans for forcing it, is just to build a mild hotbed, that will yield about 80° of bottom heat, and from 55° to 60° of top heat, place the roots thickly in it, and cover with any old box or opaque material that will exclude light and air, and which will leave an open space of 12 or 15 inches over the crowns. For a constant supply for first cutting, this plan is apt to give too much produce at a time, and, therefore, it is more suited to large families and market supply, than to small households. In the latter case, little at a time and regularly is more wanted, and, therefore, though we might follow the above plan in a dark corner of the Mushroom-house, we prefer for the first crops, packing a lot of roots in some large pots. If these come faster than we want them, we can remove them to a cooler, dark place. If they do not come so soon as we want them, instead of placing more heat about the pots, which might injure the flavour of the vegetable, we find it better to place a pot of the same size reversed over them, and this soon draws the heads to the desired length. Let it be borne in mind, that all things thus grown in the dark, be it *Sea-kale*, *Rhubarb*, *Chicory*, or *Turnip* tops, depend chiefly for their strength on the stored-up matter of the previous season, and for their quality in being used in a comparatively short and stubby state—say 6 inches for *Sea-kale*, and 10 or 12 inches for *Rhubarb*. Go beyond that and you have watery juice instead of substance.

Mushrooms.—Perhaps it would be as well to notice what can only be defended in an emergency. A short time ago we stated that we feared our summer-beds would not give a large enough supply for a shooting party, and, therefore, we put more heat to the first bed in the shed Mushroom-house, by turning over a preparatory bed below the one that was to come on, so as to steam the house, and by letting heat into a hot-water pipe, and steaming the house by syringing the hot pipe. For eight or ten days the heat of the atmosphere would range from 60° to 65° and 70°, just from 5° to 10° too much for general purposes. The object so far was gained, as the bed has been, and is now, a white sheet of *Mushrooms* of all sizes, from that of the fashionable cap hat to the size of pin heads. But the very sight of the large thick *Mushrooms* tells the initiated that the thing has been over-done. We like to see those huge *Mushrooms*, when it is desirable to have them, clinging, as it were, to the bed, with their thick juicy stems only an inch or two in height. Those large specimens we are now gathering, on the contrary, are many of them on stems of from 3 to 4 inches in height—a sure sign that the bed has had too much heat, and almost as sure a sign that the produce may be ample for a time, but that it will be exhausted prematurely, and

that, therefore, when this treatment is from necessity resorted to, due care should be taken to secure successions. Even what we meant for a succession piece has come in a fortnight or three weeks too soon, and, therefore, a third piece has been spawned and earthed, and a fourth bit put in preparation. In making fresh pieces at this season in houses bearing for table, all rank steams should be avoided, or they will taint, and in some cases discolour the Mushrooms. The Mushroom itself is in no way particular as to the extra sweetness of the material at its roots, it is only as affecting the top that this care is necessary. In making a fresh bed, therefore, it is desirable to place the rankest material at bottom, and the sweetest at the top, and if this is not quite sufficient, the best remedy for keeping the house sweet by keeping down all noxious steams, is to cover the surface of the bed with a sprinkling, say an inch or more, of dry earth. This after having served its purpose, may be mixed with the manure at spawning time. At first from necessity, through shortness of manure, we used a considerable amount of dry, fibry loam mixed with the fermenting material, and for some time we do so from choice, as the soil becomes such a good preparer and moderator, that dung may be used without losing its rich properties by turning, drying, &c.

Trenching for Carrots.—The cleaning the pleasure grounds and the collecting of leaves has prevented us doing much in the way of digging, trenching, and ridging. Were we sure of a good frost in the month of November, we would prefer leaving such work until the surface of the ground were pretty well frozen, as that is one of our best helps for getting rid of many enemies in the shape of slugs and snails. It is as well not to delay after December, however, for if we wait for the surface to be frozen, we may lose the chance of having the fresh-turned-up ground pulverised and mellowed by the best of all cultivators. Bear in mind, that we disapprove of turning down frozen soil; but we do like to have the soil of beds and quarters frozen and thawed again before we turn it down. In all old kitchen gardens some extra care should be taken in preparing the soil for Carrots and other roots of a similar description. The great drawback is generally an excess of richness in the surface soil at least, which causes the roots to fork instead of descending straight and well-formed. This also is one reason why the Short Horn is more cultivated in such circumstances than the long Altringham, &c. For a year or two, our Carrots did not please us, but this season they were very good notwithstanding the drought, and we believe just from preparing the ground as we used to do in old gardens. We have now commenced ridging a piece that has borne heavy crops of winter Onions, Peas between, and then Cauliflower between the Peas. The ground was, therefore, in far too rich a condition, especially near the surface, for Carrots. It is being ridged-up three spits deep, the upper spit being placed at bottom, and the fresh bright soil of the bottom, with just a little of the clayey subsoil, placed at the top. The bottom spits we will not meddle with any more, as they have been well broken; but the top spit, now in the form of ridges, we would scatter over with a little gas lime if we had it, failing that we will sprinkle a little tar with a brush over it, just leaving a drop here and there to deter by its smell; and after sprinkling a little lime, chalk, or lime rubbish, or charred rubbish along the rows, we will turn over these surface ridges several times during the winter before levelling them down for sowing in the spring, and the experience of the past would predicate that next season we shall obtain nice, large, straight roots, as the best richest soil at the bottom of the trench will entice them downwards instead of encouraging them to fork at the top. In very poor sandy soil we have seen magnificent crops from manuring heavily, but placing that manure from 12 to 15 inches from the surface.

Horseradish.—Few things keep up their price at market better than this hot customer. In general it receives but scant justice, being condemned to some out-of-the-way corner, and where, from remaining long in the same place, the produce becomes much harder and less succulent than younger, better-cultivated roots. We have met with some instances where due attention was paid to it, and it went through the rotation of cropping much the same as other perennial vegetables. In these cases the ground was duly prepared—not

little bits, in the usual way, but long thin pieces were used for planting, and the ground kept hoed and cleaned among the plants as regularly as among Cabbages or Onions. The result was fine massive bunches of underground stems. There was little difficulty with the old plantations, as, though the smallest bit of root-stem will grow, it will also lose its vitality like the dreaded *Convolvulus*, if the top is kept well cut with the hoe. The order of these plantations we felt to be a rebuke to some of our out-of-the-way corners. It is not a bad rule, in taking this crop, to keep an open trench; dig to the bottom of the root pretty well, and fresh plant as you go on. But we have always noticed that a man would require the eyes of Argus to do such work anything like systematically: and hence the Horseradish department as to appearance, is generally such that the least said is the better. In making fresh plantations the ground should be trenched from 18 to 24 inches deep; in general little manure will be necessary, and that chiefly placed at the bottom; but if the ground is stiff, or approaching to clay, burned and charred rubbish, lime rubbish, and chalk will benefit it much, and cause the plants to grow with more vigour. The sets should be planted in rows, 20 inches apart, and 8 or 10 inches apart in the row. Where much in demand and valued, a little bit should be planted every two years or so, and the older plantation stubbed up. Other departments next week.—R. F.

COVENT GARDEN MARKET.—DECEMBER 10.

The supply of out-door vegetables continues good. Forced vegetables only comprise Sea-kale and Dwarf Kidney Beans. Dessert Apples are still plentiful, and principally consist of Newtown Pippin, Cox's Orange Pippin, Nonpareil, and Old Golden Pippin. In dessert Pears the best are Winter Nells, Glou Morceau, Chaumontel, Easter Beurré, and Matthews' Elisa, or Groom's Princess Royal, which is of good quality, and very serviceable at this period of the year. Grapes and Pines are sufficient for the demand.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples..... $\frac{1}{2}$ sieve	1	0	2	0	Melons.....each	1	6	4	0
Apricots.....doz.	0	0	0	0	Mulberries....punnet	0	0	0	0
Cherries.....lb.	0	0	0	0	Nectarines.....doz.	0	0	0	0
Chestnuts.....bush.	14	0	20	0	Oranges.....160	5	0	10	0
Currants, Red... $\frac{1}{2}$ sieve	0	0	0	0	Peaches.....doz.	0	0	0	0
Black.....do.	0	0	0	0	Pears (kitchen)...bush.	5	0	10	0
Figs.....doz.	0	0	0	0	dessert.....doz.	1	0	3	0
Filberts.....100 lbs.	50	0	80	0	Pine Apples.....lb.	5	0	8	0
Cobs.....do.	70	0	80	0	Plums..... $\frac{1}{2}$ sieve	0	0	0	0
Gooseberries... $\frac{1}{2}$ sieve	0	0	0	0	Pomegranates...each	0	6	1	0
Grapes, Hamburgh lb.	2	0	6	0	Quinces..... $\frac{1}{2}$ sieve	4	0	6	0
Muscats.....doz.	5	0	8	0	Raspberries.....lb.	0	0	0	0
Lemons.....100	5	0	10	0	Walnuts.....bush.	14	0	20	0

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes.....each	0	0	0	0	Horseradish...bundle	2	8	5	0
Asparagus.....bundle	0	0	0	0	Leeks.....bunch	0	2	0	0
Beans Broad..... $\frac{1}{2}$ sieve	0	0	0	0	Lettuce.....score	2	0	4	0
Kidney.....100	2	0	3	0	Mushrooms.....pottle	1	6	3	6
Beet, Red.....doz.	1	0	3	0	Mustd. & Cress, punnet	0	2	0	0
Broccoli.....bundle	1	0	2	0	Onions.....bushel	4	0	5	0
Brussels Sprouts $\frac{1}{2}$ sieve	2	6	3	6	pickling.....quart	0	6	0	0
Cabbage.....doz.	1	6	3	0	Parsley.....doz. bunches	4	0	6	0
Capsicums.....100	0	0	0	0	Parsnips.....doz.	0	9	1	0
Carrots.....bunch	0	5	0	8	Peas.....quart	0	0	0	0
Cauliflower.....doz.	4	0	6	0	Potatoes.....bushel	2	6	4	0
Celery.....bundle	1	0	2	0	Radishes doz. bunches	0	9	1	0
Cucumbers.....each	1	0	2	0	Savoys.....doz.	1	0	2	6
pickling.....doz.	0	0	0	0	Sea-kale.....basket	3	0	0	0
Endive.....score	2	6	3	0	Spinach.....sieve	3	0	5	0
Fennel.....bunch	0	3	0	0	Tomatoes..... $\frac{1}{2}$ sieve	0	0	0	0
Garlic and Shallots, lb.	0	8	0	0	Turnips.....bunch	0	3	0	0
Herbs.....bunch	0	3	0	0	Vegetable Marrows doz.	0	0	0	0

TO CORRESPONDENTS.

* * We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to The Editors of the Journal of Horticulture, &c., 171, Fleet Street, London, E.C.

N.B.—Many questions must remain unanswered until next week.

CONIFER FOR DRY SANDY SOIL (*Monticola*).—None will thrive so well in such a soil as *Pinus insignis*, and it is one of the most handsome.

BOOKS (J. T. P.).—"The Garden Manual," which you can have free by post from our office for twenty postage stamps; and Richardson's "Domestic Figs," which you can obtain from any bookseller.

NEW ORNAMENTAL-FOLIAGED PLANTS (K. D. T.).—Of the Mrs. Pollock class of Geraniums you might add to those you already possess, Captain Meade, Lady Cullum, and Sunset; also Saxifraga Fortuni, Londona aureo-reticulata, Iredale Herbati, and Aucuba japonica plots. We might name a host of other plants did we know the purpose for which you require them, and whether you can command a stove temperature. You will, however, find a list of the new plants of the year in "Hogg's Gardeners' Year Book," about which you inquire. It is now ready, price 1s. free by post 1s. 2d.

GOREX OR FURZE PROPAGATING (Rusticus).—We find it succeeds better by sowing than transplanting, it being difficult to remove at any time, even when young.

POINSETTIA PULCHERRIMA DYING (H. F.).—Your plant is dying from want of a suitable temperature. It is not usual for it to die down at this season, nor in fact at any time, though it does lose its leaves after flowering, when it should have a rest and be pruned in. It requires the heat of a stove, and cannot be grown, so far as we know, successfully in a temperature of less than 55° in winter, though we have had it doing fairly in a conservatory at about 50°. We fear it is dying back because the shoots were not sufficiently ripened, and you will only accelerate its death by cutting it back. Keep in the warmest and driest part of the house, and give no water beyond a little to prevent the wood shrivelling. If you have a hotbed ready in March we would plunge the pot in it, cutting down when the eyes become prominent, and growing in the frame hotbed all the summer, so as to have it in bloom early, which we fear will never be the case if grown in a greenhouse.

SHRUBS FOR GROWING UNDER TREES (Rusticus).—The best that we know are Berberis, or Mahonia aquifolium, B. repens, and B. Darwinii. They are very ornamental, and form excellent game cover. We have a plantation such as yours, which is desired to be ornamental, and we find that of all things we plant in it Aucuba japonica does the best, and takes to the situation better than any other plant. We have some plants 6 feet high, and as much through, and this under Elm trees which are large enough for rooks to build in. Evergreen Privet does very fairly; so does the Box-leaved Privet; common Hollies, and common Laurels are indeed good plants for such places, but difficult to establish at first, owing to the dryness of such situations. We planted some hundreds last spring both of Laurels and Hollies, also Aucubas, and, notwithstanding the unparalleled dryness of the summer, we have not lost a single Aucuba, and many Laurels which we thought dead are now shooting from the root; the Hollies are still alive, and will no doubt shoot with the return of spring. They were watered regularly twice a week. It is no use planting such things in dry situations unless they are looked after until established. Common Yews we have doing fairly, and Butcher's Broom well, Box does badly, Rhododendron ponticum middling,—the soil, however, does not suit such plants. Alexandrian Laurel (Ruscus racemosa) does well, Portugal Laurels are indifferent, and the Periwinkles are excellent for covering the ground. We have not had many opportunities of seeing Skimmia japonica in such situations, but feel justified from what we have heard in recommending it for select spots in shady plantations.

BIRMINGHAM FRUIT SHOW (W. McP.).—Blenheim Orange and Blenheim Pippin are the same Apple, and the collection in which it was exhibited as two distinct varieties should have been disqualified. It was an oversight on the part of the judges. The letter you copied was not intended for publication.

EDUCATION OF GARDENERS (W. D.).—The subject needs no further advocating. You are quite right in considering a general knowledge of chemistry is desirable to be possessed by a gardener, and you will find chemistry fully applied to horticulture in "The Science and Practice of Gardening" published at our office.

OBTAINING A STOCK OF PURPLE KING VERBENA (P. J. A.).—If you have a gardener friend he would most likely be in a position to let you have the greater part of the cuttings desired by the beginning of next March. If you could obtain half, or even a fourth of them, by the first week in that month, you might have a hotbed of well-sweetened dung made a fortnight previously, 5 feet high at back, and 4 feet in front, and a foot wider than the frame all round. This would give a bottom heat of from 80° to 85°, and a temperature of from 70° to 75° within the frame. A few inches of rather dry soil should be placed over the bed, and 2 or 3 inches of moist sand upon it. The cuttings, being inserted in pure silver sand, in saucers, without a drainage opening, will, if the soil be kept wet, strike in ten days or a fortnight. You may then place some rather light loam and leaf mould within the frame for a few days, to become warm, and in this the cuttings may be potted singly in 60-sized pots when well rooted, watering gently with water of the temperature of the frame. Continue them in the frame, and when sufficiently grown take off their tops, and make cuttings of these, the bed being lined to keep up a temperature of 60° or 65° at night. These cuttings will strike in another ten days or a fortnight, and be ready for potting off, and in about ten days more they will each furnish a cutting from the point. The cuttings from which they were taken in the first instance will, through the stopping, by this time have made two, three, or more shoots, now of sufficient length for cuttings, which, with those already struck, will give you something like the number of cuttings desired, and of course plants by the latter part of April; but you must so time a bed as to have it ready for the third lot of cuttings by the third week in April, the two first batches being gradually hardened off. The last batch will be struck in ten days or so, when they are to be potted off, and, when well established, gradually hardened off, so as to bear planting out in the last week in May. Providing you cannot obtain one-fourth of the number of cuttings desired by the beginning of March, we would purchase, if we could, a dozen strong plants (which we very much question if we could do), and place them in a mild hotbed, not so hot as for cuttings; and having other beds ready to strike the cuttings in as they are obtainable, twelve good plants would furnish the number of cuttings you require; but we fear the main difficulty will not be in obtaining the cuttings, but the plants to take them from. Your best plan would be to make friends with some gardener who has these plants to furnish by the thousand. Failing this, we do not think you could do better than purchase a few dozen strong plants early in spring, even if you gave for them a trifle more than the regular price.

CINERARIA LEAVES CURLING (J. P. F.).—If your Cinerarias are free from fly why do you smoke them once a week? We have no evidence, but think that most likely the curl in the leaf is from the frequent use of the tobacco smoke, and letting it reach the plants in a hot state.

ADDRESS (H. J. F. H.).—We have not Mr. Noye's address.

CALADIUMS—COBEA SCANDENS—GLOXINIAS (Rosa-flores).—We fear the Caladiums will perish if kept in a greenhouse during the winter. They should be wintered in a stove, and be kept on a damp floor, so that the soil may be kept a little moist. If kept just dry the roots are liable to rot when they are watered in the spring. If you have no better place than a greenhouse, you will make the most of it by keeping them in the hottest part, and not letting the soil become too dry. If the case was heated they ought to have been kept in it without water all winter. Pot them in March, and put them in the case at once, watering sparingly until growth fairly commences, then water freely. Cobea scandens does not flower because it has not room enough on a small wire trellis. Give the plants large pots to grow in, and the upper part of a back trellis in the greenhouse, and they will bloom abundantly; or, if you want anything to cover the roof in order to afford a little shade to Ferns and the like, your two plants will cover them in a short time. You will do no good by cutting fresh shoots with fine foliage. Give the Gloxinias very little water and keep near the glass, and they will go to rest as soon as they ought. Keep in the warmest part of the greenhouse all winter, placing the pots on a damp floor, but without any water. Shift in March from thumb pots into 24's, watering gently; and do not water much, only keep the soil just moist until they begin to grow. If you have a hotbed to plunge them in after potting they will do all the better, and you may grow them in it until they are showing for bloom, when they will do well in the warmest part of the greenhouse if they are hardened-off a little before removing them from the hotbed.

COVERING ASPARAGUS-BEDS IN WINTER (H. N. E.).—Unless you wish to have the Asparagus with a long slender underground shoot with no more of it eatable than the green or purple tips, there is no benefit in the French system which you mention. In what way the uncovering of the roots in winter can benefit the plants we cannot perceive; and we know very well if the soil were taken off the crowns in autumn that the frost would kill every crown so exposed in winter, for Asparagus, though a native of this country, becomes very tender through high feeding or rich manuring. The crowns in winter ought not to be covered with less than from 3 to 6 inches of soil, 3 inches more of manure being added every autumn. It should not be too rotten, so that it may act as a manure and protection at the same time. Taking the roughest of this way in March, and forking the shortest into the beds at the same time, is the best method of securing strong shoots in April onwards. These are not fit for cutting until they are from 3 to 6 inches out of the ground, or more than half green or purple, that part only having the flavour of Asparagus, the underground white part being about as tough, and quite as tasteless, as the root of an Elm tree. This is the English system, and the same as that pursued by your gardener. Year-old plants are not covered with soil or anything in autumn, for, not being highly fed, they are not so tender as old plants. The French system differs from the English in earthing the beds in spring, so that the shoots may be blanched their full length, or to a length of 9 inches with the tips just coloured. Such look very nice, but are tasteless. The beds being covered with soil in spring it is necessary to take a quantity of it off in autumn, so as to prevent the roots or crowns rotting, as they are liable to do when in a wet soil, and in order that the roots may be better manured, and not to expose them to the atmosphere, for that can do plants little good when they are in a state of rest. In this case the soil requisite to blanch the shoots would have to be put on the beds again in spring. There certainly would be no harm in trying the French method; but if you wish good Asparagus for table keep to the old plan.—G. A.

SMOKE IN GREENHOUSE (Erin-go-bragh).—Without more particulars we cannot account, with certainty, for the bad smell from your fire. If newly done the lime would give off strong vapours when a strong fire was used. In such a case you had better use a slow fire all day during the mild weather, with plenty of air in the greenhouse, until the bricks and joints are slowly dried. Are you sure that clean water was used for making the lime, and also that the bricks were sound and good? for we recollect of a fire being made with bricks from what had been a manure tank, and no time would remove the smell. In either of these cases much more care and patience must be used. Does the fire draw freely? for if not the smoke will be apt to come through the joints; and if rubbish, such as cinders, containing bits of cloth, feathers, vegetables, &c., is used, if the smoke do not come through the odours will. Is your iron pipe for the smoke large enough for the fire, or if large is it clear throughout? as they soon fill, and the scent from themselves, and then from sending smoke back, is bad. Use, at first, good dry fuel.

HOT-WATER PIPES FOR CUCUMBER-HOUSE (Wigan).—You do not state the height of your 8 feet wide and 23 feet long span-roofed Cucumber-house, with a bed 2 feet 3 inches wide on each side; but allowing it to be of the ordinary height, we would say that one pipe all round below the beds would be sufficient for Cucumbers in May. To get Cucumbers all the winter, or very early, you had better have two pipes for bottom heat beneath each bed, and two for top heat all round.

HEATING BY GAS (G. P. S.).—We should be glad if some experienced correspondents would state their practice as to this mode of heating. We adopted it some years ago successfully. Meanwhile we would state that few plants suffer more from gas fumes than Ferns do, and, therefore, the fumes should be kept out of the house by having a tube or chimney to pass into the outer air. Could not the house be heated from the same place as that which is used for the greenhouse? If the results of the combustion of the gas are got rid of, we have no doubt that gas would serve the purpose.

CELERY BOLTING (Bickley).—We presume you mean that your Celery is throwing up the flower-stalk, and therefore becoming unfit to send to table. You would find lately the whole *raisonne* of this in an article by Mr. Fish. Dryness at the roots is the chief cause, and the next cause is checking growth before planting out.

TUBEROSE CULTURE (Jane).—We fear no better results will attend your efforts another year, as the roots seem to be considerably weakened. We would pot them in March in turfy loam of a rather strong nature, giving only a slight watering, and keeping on a shelf in the greenhouse. In April plunge the pots in a mild hotbed (75°), and keep them there until the first week in August, giving a good supply of water, and syringing the plants overhead, so as to keep down attacks of red spider. They should be kept near the glass. When they have made all the growth they appear disposed to do reduce the supply of water to half for three weeks, and in three weeks more leave it off. During the winter keep the pots in a light airy part of the greenhouse.

BOILERS WITHOUT BRICKWORK (S. T.).—Any of those boilers advertised as suitable without setting in brick would answer your purpose, providing you have a chimney from them. If the boiler is inside the house no heat will be lost, but great care must be taken of the fire to prevent back draughts, or you will have the fumes that the fire now gives you. The advantage of a boiler, with or without hot-water pipes attached, is, that the sides do not get so hot as an iron stove carelessly managed is apt to do. For all small single greenhouses for amateurs we would prefer a brick stove to an iron one, because the brick does not get so hot, and retains the heat longer than the iron.

EARLY Vinery (A. B. C.).—Your proposed house will do admirably for early forcing, or for keeping Vines late; but for the purpose you should have three pipes instead of two for your hot-air chamber, and you will want at least double the pipes you propose for top heat.

BOOK (G. L. D.).—"The Cottage Gardeners' Dictionary" defines the names of the plants. It is published by Mr. H. Bohn, London.

TREE ORION.—"A Nurseryman" wishes to be informed where he can obtain this species? He has applied without success to other nurserymen.

FILBERT AND COB NUTS (S. T.).—Most likely the variety advertised in our columns is an improvement on former ones, but whether it be the one you speak of or not, we are not able to say. In our columns next week, you will see an article on the Filbert by one of our correspondents, which will give the information you require.

RASPBERRY CANES NOT BEARING (M. B.).—If your situation be a very dry one, this fruit will not do well with you, but if you can remove them to a damper one, so much the better. After planting cover with rough dung, and in future years dig only very shallow amongst them, as the roots lie near the surface. Mulching in summer and supplying with liquid manure will do much to insure good fruit even on dry ground. If the plants be vigorous, you may leave four or five canes, provided the plants be wide enough apart, but do not by any means crowd them. Is your kind a good one? If not, try Prince of Wales, or Improved Fastolf.

REMOVING GOOSEBERRY, CURRANT, AND OTHER TREES (Idem).—These may be removed as early as you like, taking care in doing so not to tread the ground into a sort of pulpy-like mass. The earlier such work is done after the leaf falls the better, in order that the roots may commence their work in their new abode.

CHLORARIAS NOT FLOWERING IN LARGE POTS (Idem).—It is quite as well that your plants do not show flower-stems, as it is likely these would all become abortive or nearly so, and produce no petals, as is generally the case with Chlorarias showing flower in the dark days. By-and-by your plants will be all the finer from not throwing up flower-stems too soon. If you can induce them to flower in October that will do, but not later.

PRUNING PEACH TREES (J. H.).—It is customary to shorten the shoots in all cases where a good wood-bud can be had to cut back to. Usually such buds are between two bloom-buds, but care must be taken to insure this, and it is better to delay the pruning until these show themselves with certainty. If there be plenty of wood well furnished with bloom-buds on the tree, you may cut away the gross shoots entirely, unless one should happen to be where it is wanted to furnish a naked part of the tree. It is, however, sometimes necessary to leave shoots their full length when trees are not furnished with wood-buds, and this is often the case in trees not over-healthy, as there is generally one or more buds at the point which are certain to grow. We must also caution you against leaving fruit on a branch that has not a leading shoot, for although the blossom will set and the fruit will advance to a considerable size on such shoots, it will not arrive at maturity, and will, therefore, only exhaust the tree and cause disappointment.

GRAPE FOR LATE Vinery.—ROUND AND LONG BEDS ALTERNATELY (B. H. W.).—Black Alicante is suited for a late vinery, but is a bad setter. You had better have Lady Downes'. We forget the exact size of the beds at the Crystal Palace, but whatever the diameter of your circle may be, the same width and double the diameter in length will look very well for your long beds. Thus, if your circles are 8 or 10 feet in diameter, the long beds should be 8 or 10 feet wide, and 16 or 20 feet in length. Of course, the sweep of the circle will cause the rounding-in of the ends of the long beds. It does not matter whether the outside end of a long bed is rounded or not, but it would look as well done so, and to give a reason for doing so, you might place a small shrub or Rose on the grass there. It is, however, a matter of no moment. The white Geranium will not be so showy as the Feverfew early in the season, but it will likely be better in the autumn. We think the long beds will be best planted in lines with a border all round. But you may change them every year, and cross and recross them in ever so many plans, and all be beautiful if symmetrical and the colours bright and distinct.

NAMES OF FRUITS (Inquirer).—Vicar of Winkfield. (T. M. F.).—Calville Rouge Apple; Van Mons Léon le Clerc Pear. (William Hilder).—1, Ben-helm Pippin; 2, Early Nonpareil; 3, Bedfordshire Foundling; 4, Scarlet Nonpareil. (George Curd).—1, Fearn's Pippin; 2, Court of Wick; 3, Lake Colonel Vaughan's; 5, Calville Blanche; 7, Old Nonpareil; 8, Franklin's Golden Pippin; 9, Golden Russet. (J. A., Nottingham).—It is one of the wine Grapes, and probably never had any name known in this country. It is quite worthless.

NAMES OF PLANTS (C. S. N.).—Barren frond of *Adiantum capillus-Veneris*, Common Maiden-hair.

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

PREVENTING THE RAIDS OF FOWLS— BRAHMA POOTRAS.

THERE are one or two plans by which "A SOUTH COUNTRYMAN" might, I fancy, still keep his special pets, Hamburgs. True, they are terrible fliers, but it must be remembered that all fowls fly only when alarmed, and that their method of "fencing" is to alight on the fence like a

Welsh hunting pony, and then down on the other side. Now, if the present fences of "A SOUTH COUNTRYMAN" are walls, he may nail stout strips of wood on his yard-side of the wall firmly into it, letting them be 2 feet at the least higher than the wall, and about 6 feet apart. To these let him attach some fine three-inch galvanised wire-netting, and if he do not put a connecting rail between his uprights, as so many do for the sake of appearance, I do not think even his Hamburgs will get over. With a connecting rail they will be certain to make it the alighting spot. In addition to this he may cut half of one wing, and if he is careful to do this himself, cutting only the under wing, no person can detect it, and it materially diminishes the power of flight. If the fences are wooden the same plan may be adopted. A hedge fence must depend on its goodness, but a foot width of wire at the bottom, if the fowls can get through, and a modification of the uprights and wire at the top ought to succeed. In the case of hedge fences the wire must be wider at the top; but "WILTSHIRE RECTOR'S" advice to another correspondent in the same Number will suit him. "Try, try, try again," and from my own experience I feel certain he will succeed.

I have to thank several of your correspondents for kindly notices of any communications, and I am very glad to see from "BRAHMA POOTRA'S" account, that my history of Lord Tredegar's Show is bearing fruit.

I hardly know how to take myself in reverse—to wit, "Z. A. B. Y." "Tis hard work to write the letters that way," and, as Sam Slick would say, "don't seem to come kinder natteral." Does he mean all he says? or is he, as the same author would say, only "a bawming of me?" Well, it is more suited to my *amour propre*, bump very largely developed, that it should be the first; but I may tell him, that "the idea of the judge giving an account of his awards" is not mine, but I either read in your report of the Poultry Club October Meeting, or dreamt that I did, to this effect, that in cases where the judge appeared to have given the prizes in opposition to the standard of excellence, he would be requested to explain his reasons for so doing, and I still think that from such exposition made public all of us would learn something.

I do not know whether "Z. A. B. Y." fancied I was the writer under other feathers of the said article, in defence of the purity of my pets (Brahmas), signed "B." if so, he will shortly find out his mistake; at any rate I think he will see at Birmingham, that although the correspondent might have been buried with the Brahmas, his proposed tablet erected and all, that somehow the Brahmas themselves have survived the burial and have mustered more strongly than ever, and that numbers will call them remarkably handsome birds.—Y. B. A. Z.

DARLINGTON EXHIBITION OF POULTRY AND PIGEONS.

THIS was the twelfth annual meeting held under the management of the Darlington Committee, and it is most satisfactory to say a better Show need not take place, even in the most favoured locality. The popularity of the meeting just closed may be estimated from the fact that not only were to be found in the catalogue the names of most of the principal English breeders, but also the Show was greatly improved by a very spirited competition from noted breeders resident in Scotland, and even the Emerald Isle. The very liberal list of prizes, therefore, offered at Darlington carries conviction that, with a good amount of premiums, a first-rate competition may invariably be insured.

The arrangement of the pens was excellent, and the most careful attention was devoted to the specimens whilst publicly exhibited. The total number of pens shown was somewhat over seven hundred, and the amount of inferior specimens was remarkably few.

In *Spanish fowls* Viscountess Holmsdale took precedence in adults, and Mr. Brown, of Sheffield, in chickens, the cup being secured by the adult birds, though the chickens ran closely for this much-coveted honour.

In *Grey Dorkings* the show was most meritorious, and, perhaps, the rivalry was even greater in these classes than any other throughout the Show. As may be generally supposed,

Viscountess Holmesdale made a very large and superior display of these useful birds. This lady's first-prize pen of old birds added most materially to the high reputation of the strain of Dorkings, for which Linton Park is now so proverbial. They gained the first prize in their particular class, an extra prize of a silver cup for the best pen of Grey Dorkings exhibited, and the yet additional trophy of the Society's principal silver cup for the best pen of poultry in the Exhibition, all breeds competing. Of course the neighbourhood of this particular pen seemed a perfect "resting-place" for all visitors, and at times it was even difficult to obtain a furtive glance, the anxiety to get a sight of them being universal. In chickens Mr. Charles Priest, the well-known manager of the poultry belonging to the Marchioness of Bath, stood in the first position with some capital birds that were equally successful at Brighton the previous week, and seemed but little the worse of their long journey. The first-prize Single Grey Dorking Cook was the rosy-combed one that has been oftentimes equally successful in other years, the property of Lady Holmesdale. Mr. John Robinson, of Vale House, had it all his own way in White Dorkings with a very superior collection.

In *Cochins* the success was almost a counterpart of that at the late Birmingham meeting, Capt. Heaton taking the cup, pressed closely by Mr. Bates, of Birmingham, Mr. Stretch, of Ormskirk, and one or two others. The White Cochins were really good, and shown in first-rate condition.

In *Brahmas* Mr. Boyle, of Poyner Park, Dundrum, Dublin, left but a very sorry lot of premiums to the share of his rivals, winning in both classes (old and chickens), and again for Single Cocks, though the competition was excellent, and the classes well filled.

The *Game* were all of high character, and Messrs. Statter, Fletcher, Aykroyd, Julian, Sir George Gore, Billing, Crossland, and a few others found a host of opposition from Game fowls of the best strains in the kingdom arrayed against them, so that to win their position was no slight undertaking.

In *Hamburghs* the Spangled birds were beyond doubt the best represented variety—a feature we scarcely anticipated in so generally well-known classes, particularly as the Pencilled breeds abound in the surrounding districts.

The *Polands* were exceedingly good, the Black with White Crests being especially so.

We regret, as faithful journalists, to be compelled again to record a fresh attempt at deception practised by the owner of decidedly the best pen shown in this class, and which discovery not only entailed the loss of a first prize they would otherwise have obtained, but the well-merited disgrace of public "disqualification" also. It really appears as though, to some minds, the annoyance of detection exercised but little salutary influence in such matters; for it is only, perhaps, six months back that the same exhibitor, Mr. Henry Carter, of Upperthong, Holmfirth, met with similar exposure for then dyeing the tail of a Poland cock; the imposition on the present occasion being adopting a similar plan as regards the legs of the fowls he exhibited. It is well known to all experienced breeders that the legs of Black Polands fade much in colour from age, still this fact affords no justification for adopting measures to secure prizes quite opposed to all regulations, and equally so to the opinions of all straightforward competitors. In the hope to put down such unjust practices, as they affect other exhibitors' interests, we adopt the plan of exposing to public animadversion every case that may be capable of proof; and though an occasional ill-gotten prize may possibly be secured by such malpractices, the risk of disgrace may, we trust, even yet prove a deterrent for the future.

The Silver and Gold-spangled Polands were better than customary; and most of the *Bantams* were exceedingly good. *Geese*, *Turkeys*, and *Ducks* were shown of the best quality.

The show of *Pigeons* was capital throughout, though the entries were somewhat less extensive than heretofore. The Carriers, Powers Fantails, Barbs, and Jacobins are worthy of especial mention.

SPANISH (Black).—First and Cup, Viscountess Holmesdale, Linton Park. Second, E. Brown, Sheffield. Commended, Mrs. Bolland, Bedale. *Chickens*.—First, E. Brown, Sheffield. Second, D. Parsley, Bristol. Third, J. Shortness, Newcastle-on-Tyne.

SPANISH (Black).—Cock.—First, H. C. Nobbs, Northampton. Second, E. Brown, Sheffield. Highly Commended, Viscountess Holmesdale. Commended, D. Parsley, Bristol.

DORKINGS (Coloured).—First and Cup, Viscountess Holmesdale. Second, T. Statter, Whitfield, Manchester. Highly Commended, F. Pease, Southend, Darlington; Rev. J. F. Newton, Kirby, Stokesley; Miss Forster, Cliffe, Piercebridge. Commended, Lord Binning, Mellerstain, Kelso, N.B.; Miss Milne, Otterburn, Kelso, N.B.; A. Perkins, Darlington. *Chickens*.—First, C. Priest, Worthing. Second, F. Pease. Third, Sir St. G. Gore, Hopton Hall. Highly Commended, Viscountess Holmesdale; Rev. J. G. A. Baker, Biggleswade. Commended, J. White, Northallerton; Rev. J. F. Newton; Viscountess Holmesdale; J. Robinson, Garstang; Sir J. D. Wauchope, Bart., Dulkeith, N.B.

DORKINGS (Coloured).—Pair of Pullets.—First, C. Priest, Worthing. Second, Sir J. D. Wauchope, Bart. Commended, F. Pease, Southend; Miss A. Wilcox, Nailsea Court, Bristol.

DORKINGS (Coloured).—Cock.—First, Viscountess Holmesdale. Second, T. Statter, Manchester. Highly Commended, C. Priest, Worthing; W. G. Bannister, Woodbridge, Suffolk; Sir J. D. Wauchope, Bart. Commended, J. White, Warlaby; F. Pease, Southend; Rev. J. F. Newton, Kirby; Rev. J. G. A. Baker, Old Warden.

DORKINGS (White).—First and Cup, J. Robinson, Garstang. Second, D. Parsons, Cusdon. *Chickens*.—First, J. Robinson. Second, H. Lingwood, Needham Market, Suffolk.

COCHIN-CHINA (Cinnamon and Buff).—First, Capt. H. Heaton, Manchester. Second, H. Bates, Birmingham. Commended, C. T. Bishop, Lenton, Nottingham. *Chickens*.—First and Cup, Capt. H. Heaton. Second, T. Stretch, Ormskirk. Highly Commended, A. Perkins, Darlington. Commended, J. Nelson, Heaton, Mersey.

COCHIN-CHINA (Any other variety).—First, Rev. F. Taylor, Kirby Lonsdale. Second, W. Dawson, Hopton Mirfield. *Chickens*.—First, W. Dawson. Second, T. Stretch, Ormskirk. Highly Commended, Rev. F. Taylor; H. Bagge, Cambridge. Commended, H. S. Stebart, Witton Tower.

COCHIN-CHINA (Any variety).—Pair of Pullets.—First, H. Bates, Birmingham. Second, Capt. H. Heaton, Manchester. Highly Commended, C. Kerahaw, Ashton-under-Lyne; A. Perkins, Darlington. Commended, W. Gamon, Thornton-le-Moors, Chester.

COCHIN-CHINA (Any variety).—Cock.—First, Capt. H. Heaton, Manchester. Second, A. Perkins, Darlington. Highly Commended, J. Nelson, Heaton Mersey, Manchester. Commended, H. Bates, Birmingham; W. Dawson, Hopton; Rev. J. G. Milner.

BRAMA FOOTRAs.—First and Cup, R. W. Boyle. Second, H. Lacy, Hobden Bridge. Highly Commended, C. Priest, Worthing. *Chickens*.—First, R. W. Boyle. Second, H. Lacy. Highly Commended, F. Pease, Southend; C. Priest. Commended, Rev. A. D. Shafto, Brancepeth Rectory, F. Pease; E. Greenwood, Burnley; J. Wright, Woodbridge. **BRAMA FOOTRAs.**—Cock.—First, R. W. Boyle, Dundrum. Second, J. Wright, Woodbridge. Highly Commended, C. Priest, Worthing. Commended, T. Statter, Manchester.

GAME (Black-breasted and other Reds).—First, J. Fletcher, Stoneclough, Manchester. Second, H. M. Julian, Hull. Highly Commended, T. Robinson, Ulverston; G. W. Binn, Darlington. *Chickens*.—First and Cup, E. Aykroyd, Bradford. Second, J. Smith, Gramtham. Third, Sir St. G. Gore, Bart. Highly Commended, J. Fletcher, Stoneclough.

GAME (Any other variety).—First, W. J. Cope, Barnsley. Second, Sir St. G. Gore, Bart. *Chickens*.—First, Sir St. G. Gore, Bart. Second, E. Aykroyd, Bradford.

GAME (Any variety).—Cock.—First, Sir St. G. Gore, Bart. Second, J. Smith, Breder Hill. Highly Commended, J. Fletcher, Stoneclough; G. Pounder, Kirby Moorside; T. Statter, Manchester; H. M. Julian, Hull. *Cockerels*.—First and Cup, E. Aykroyd, Bradford. Second, M. Billing, Jun., Erdington. Highly Commended, T. Statter; Sir St. G. Gore, Bart. Commended, H. Thompson, Old Hutton; A. Perkins, Darlington.

GAME (Any variety).—Pair of Pullets.—First, J. Fletcher, Stoneclough. Second, W. J. Cope, Biggleswade. Highly Commended, E. Aykroyd, Bradford; A. Perkins, Darlington; T. Robinson, Ulverston; F. L. Roy, jun., Newthorn, Kelso and Silver-pencilled).—First, J. Robinson, Garstang.

HAMBURGS (Gold and Silver-pencilled).—First, J. Robinson, Garstang. Second, H. Beldon, Gilestead. Highly Commended, Viscountess Holmesdale. Commended, J. E. Powers, Biggleswade.

HAMBURGS (Gold and Silver-spangled).—First and Cup, H. Beldon, Gilestead. Second, Sir St. G. Gore, Bart. Highly Commended, W. K. Duxbury, Leeds; J. Robinson, Garstang; J. Shortness, Newcastle-on-Tyne; T. Davies, Newport, Monmouthshire; T. Burch, Sheffield.

HAMBURGS (Golden-pencilled).—*Chickens*.—First, J. Robinson, Garstang. Second, W. H. Dyson, Bradford. Highly Commended, Rev. R. Roy, Worcester; Sir St. G. Gore, Bart. Commended, A. Nuttall, Newchurch; J. Sunderland.

HAMBURGS (Golden-spangled).—*Chickens*.—First, Sir St. G. Gore, Bart. Second, B. Boynes, Kelghley. Highly Commended, H. Beldon, Gilestead; T. Burch, Sheffield. Commended, W. K. Duxbury, Leeds.

HAMBURGS (Silver-pencilled).—*Chickens*.—First, J. Robinson, Garstang. Second, Sir St. G. Gore, Bart.

HAMBURGS (Silver-spangled).—*Chickens*.—First, Sir St. G. Gore, Bart. Second, H. Beldon, Gilestead. Highly Commended, Mrs. Sharp, Bradford.

POLANDS (Black, with White Crests).—First, J. Smith, Kelghley. Second, F. Pease, Southend. Disqualified, H. Carter, Upper Thong, Holmfirth, legs painted.

POLANDS (Gold or Silver-spangled).—First, H. Beldon, Gilestead. Second, F. Pease, Southend. Highly Commended, H. Beldon; F. Pease. Commended, F. Pease.

BANTAMS (Gold and Silver-laced).—First and Second, F. L. Roy, jun., Newthorn, N.B. Highly Commended, J. Crossland, jun.; F. Pease; W. K. Duxbury, Leeds. Commended, J. Crossland, jun.

BANTAMS (White and Black).—First, T. Davies, Newport. Second, J. Crossland, jun., Wakefield. Highly Commended, Sir St. G. Gore, Bart. Commended, T. J. Charlton, Manningham.

BANTAMS (Game).—First and Cup, J. Crossland, jun. Second, Sir St. G. Gore, Bart. Highly Commended, Hon. W. T. W. Fitzwilliam, Wentworth; J. Crossland, jun.; G. Smith, Waverley, Derbyshire; J. Barker, Sunderland.

BANTAMS (Game).—Cock.—First, F. Pease, Southend. Second, Sir St. G. Gore, Bart. Highly Commended, E. Brown, Sheffield; W. Rogers, Sunderland.

DUCKS (Aythsbury).—First and Cup, J. Smith, Breder Hill. Second, Mrs. Seamons, Aythsbury. *Ducklings*.—First and Second, Mrs. Seamons. Commended, J. Eden, Greenbury, Soerton.

DUCKS (Rouen).—First, J. Nelson, Heaton Mersey, Manchester. Second,

T. H. Barker, Hovingham. *Ducklings*.—First and Cup, R. W. Boyle, Dun, drum. Second, T. Statter, Manchester. Commended, J. Nelson; W. Gamon, Thornton-le-Moor; J. D. Newsome, Batley.

Ducks (Any other variety).—First, Sir St. G. Gore, Bart. Second, T. H. D. Bayley, Biggleswade, Beds. Highly Commended, F. Pease, Southend; W. A. Wooller, Darlington; S. Burn, Whitby; J. Harris, Darlington. Commended, E. Stamper, Darlington; J. E. Jessop, Hull.

Geese.—First, Mrs. Seamons, Aylesbury. Second, W. K. Duxbury, Leeds. Highly Commended, F. Pease, Southend. *Goslings*.—First and Cup, R. W. Boyle, Dundrum. Second, W. K. Duxbury, Leeds.

Turkeys.—First, F. Pease, Southend. Second, J. Smith, Breeder Hills. Highly Commended, Mrs. Bolland. *Poult*.—First and Cup, J. Smith. Second, F. Pease. Highly Commended, Rev. P. W. Storey, Dewsbury.

Turkeys.—*Cock*.—First, F. Pease. Second, J. Smith.

ANY OTHER DISTINCT BREED.—First, W. K. Duxbury, Leeds. Second, H. Beldon, Gilestead (White Polands). Highly Commended, F. Pease (Cochin Bantams).

SELLING CLASS (Any breed).—First, Rev. P. W. Storey, Daventry. Second, J. Robinson, Garstang (Golden-spangled Hamburgs). Third, Miss Roy, Kelso, N.B. (Brahma Pootras). Highly Commended, G. Yeats, Studley, Ripon (Coloured Dorkings); W. Lawrenson, Eaglescliffe. Commended, Hon. W. T. W. Fitzwilliam, Wentworth (Golden-pencilled Hamburgs); W. Massey, Gedney (Buff Cochins); J. White, Warlaby; F. Pease, Southend (White Cochins and Brahma Pootras); W. K. Duxbury, Leeds; Sir St. G. Gore, Bart.; T. Clemenson, Darlington (Brown Red Game).

EXTRA STOCK.—Highly Commended and Commended, F. Pease, Southend (Golden and Silver Pheasants).

PIGEONS.—*Carrier Cock* (Any colour).—First and Second, T. Colley, Sheffield. Highly Commended, J. Thompson, Bingley. Commended, W. Woolley, Bunbury, Cheshire. *Hens*.—First, W. B. Van Haansbergen, Newcastle-on-Tyne. Second, F. Else, Bayswater. *Pouter Cock* (Any colour).—First and Second, G. R. Potts, Sunderland. Highly Commended, S. Robson, Burton Salmon. Commended, H. Brown, Sheffield. *Hens*.—First and Cup, G. R. Potts. Second, H. Brown. Highly Commended, G. R. Potts. *Tumblers* (Almond).—First, F. Else, Bayswater. Second, T. Rodham, Gaisbrough. *Tumblers* (Any other variety).—First, W. H. C. Oates, Beathorpe, Newark. Second, H. Yardley, Birmingham. *Fantails*.—First, W. B. Van Haansbergen, Newcastle. Second, F. Else, Bayswater. *Trumpeters*.—First, J. R. Robinson, Sunderland. Second, F. Else. *Barbs*.—First, W. B. Van Haansbergen, Newcastle. Second, W. Woolley, Bunbury. *Jacobins*.—First and Second, J. Thompson, Bingley. Highly Commended, J. T. Phipps, Darlington. *Turbits*.—First and Second, H. Yardley, Birmingham. Highly Commended, T. C. Taylor, Middlesbrough. *Owls*.—First, J. R. Robinson, Sunderland. Second, F. Else. Highly Commended, H. Yardley. *Any other New or Distinct variety*.—First, W. B. Van Haansbergen. Second and Highly Commended, H. Yardley (Spots and Satin-ees).

Mr. Edward Hewitt, of Sparkbrook, Birmingham, and Mr. Richard Teebay, of Fulwood, Preston, judged all classes except Game; the Game fowls coming exclusively under the jurisdiction of Mr. Thomas Challoner, of Chesterfield; and Mr. W. Thompson, of Southowram, Halifax, officiated for the Pigeons.

YORKSHIRE SOCIETY'S POULTRY, PIGEON, AND RABBIT SHOW.

(From a Correspondent.)

THE eighth annual Exhibition of this flourishing Society terminated at York, on Friday, the 2nd inst., with results highly satisfactory to its promoters. This year a large additional attraction to the Show, was created by the introduction of Pigeons and Rabbits, and the receipts were about £100 in excess of last year. There was a good show, embracing 265 pens of poultry, 276 of Pigeons, and 52 Rabbits. The birds were well arranged, and the building is well adapted for the purpose. The city of York being very central for such an Exhibition, I hope next year to see a large increase in the entries. It must be borne in mind that this year the Birmingham Show was going on at the same time, nevertheless, the poultry and Pigeon classes were all well filled with first-class birds from some of the principal breeders and exhibitors in England. The Rabbits were also well represented, though next year I anticipate some additional classes for the various colours, &c. I submit the following notes on the various classes.

Dorkings, the second-prize pen I think ought to have been first, and Mr. Pease, of Darlington, showed a splendid pen of Whites, which certainly ought to have been noticed. In the chicken class the birds were of great merit, and I think fairly judged. The *Spanish* classes, both adults and chickens, contained some excellent birds. The *Cochins* were well represented, there being twenty-five entries; but I was sorry to see only one class for all the varieties. The *Game* classes were all well filled, but no birds of any particular merit shown. The four classes of *Hamburgs* were also well represented with some beautiful specimens, though in some classes I think they were not at all well judged, especially the *Silver-spangled*. There was a good display of *Polands*, Miss Beldon taking first with a splendid pen of Silvers. In

the "Any variety" class there were nineteen entries, ten of them being for *Brahma Pootras*, thus showing the necessity of establishing a separate class for these birds. There were also some entries of them in the "selling class." In *Game Bantams* there were sixteen entries. The first prize went to a beautiful pen shown by Mr. George Smith, Staveley, Chesterfield. In *Bantams* of any other variety, there were twelve entries. The first prize went to Mr. R. Pease, Darlington, for a splendid pen of *Silver-laced*.

In *Ducks*, *Rouen*, or any other variety, there was a large entry, but the judging has given very great dissatisfaction. The *Aylesbury Ducks*, *Geese* and *Turkeys*, were all well represented, and I think fairly judged.

In *Pigeons* there was great competition in the *Carrier* classes, there being twenty-nine entries for the best cock of any colour, and twenty-seven for hens. It is generally considered that the cocks were fairly judged; but in hens it is thought the second-prize Dun, belonging to Mr. F. Else, Bayswater, ought to have been first. In *Pouter* cocks of any colour there were twenty-two entries; and in hens of any colour, there were nineteen entries. The general opinion of fanciers is, that in these two classes the birds were not at all judged rightly, as in the cock class there was a fine display, consisting of *Mealies*, *Whites*, and *Blues*, belonging to one of our famous breeders, Mr. Henry Simpson, of Newark, and I consider one of his *Mealy* birds to be the finest style of bird ever seen, having symmetry in every point. His white *Pouters* were also of great merit, the first-prize bird belonging to Mr. S. Robson, Brotherton, having been bred by him, gives him great credit. The *Short-faced Tumblers* were not well represented. In *Tumblers* of any other variety, there was a very good show of this class of bird, they being represented by many good specimens. In *Fantails* there was an extraordinary show, they being represented by twenty-one entries, containing many first-class birds. The *Trumpeter* class was well filled, containing seventeen entries. In the *Barb* class there were no birds of extraordinary character. In the "Any other variety" class there was a fine display of birds, and twenty entries, the first prize going to Nuns. There was a good display of foreign specimens, but I was sorry to see none of them noticed. The "selling class" was well filled with forty-two entries, the first prize being carried by *Barbs*, the second by *Fantails* belonging to Mr. H. Simpson, Newark. Mr. Simpson's *Fantails* could have been claimed at least ten times over.

There was an excellent show of *Rabbits*, including some very fine specimens shown by Mr. Ridpath, of Manchester. The first prize tortoiseshell buck exhibited by Mr. Alex. Cattley, of York, was a fine specimen, and well deserving of its place. The entry for Dutch was only small, but the specimens were good. In *Himalayans* there was only one entry.

The following is the list of prizes awarded:—

DORKINGS.—First, Miss E. Beldon, Gilestead, Ringley. Second, T. E. Bell, Wetherby. *CHICKENS*.—Prize, F. R. Pease, Southend, Darlington. *SPANISH*.—First, G. Jackson, York. Second, Miss E. Beldon, Gilestead. *COCHINS*.—Prize, S. Robson, Brotherton. *COCHIN-CHINA*.—First, T. H. Barker, Hovingham. Second, H. A. Hudson, Ousecliffe, York. *CHICKENS*.—Prize, R. Dewes, Knaresborough. *GAME* (Black-breasted or other Reds).—First, J. Sunderland, Halifax. Second, Miss E. Beldon, Gilestead. *GAME* (Any other variety).—First, H. M. Julian, Hull. Second, T. Hartley, Head Leig. *CHICKENS*.—Prize, W. K. Duxbury, Leeds. *HAMBURGH* (Golden-pencilled).—First, Miss E. Beldon, Gilestead. Second, A. Nuttall, Newchurch, Manchester. *HAMBURGH* (Silver-pencilled).—First, J. Sunderland. Second, D. Illingworth, Burley, near Otley. *HAMBURGH* (Golden-spangled).—First, Miss E. Beldon, Gilestead. Second, I. Todd, Newall-with Clifton, Otley. *HAMBURGH* (Silver-spangled).—First, Miss E. Beldon. Second, C. Outram, Sheffield. *POLISH* (Any variety).—First, Miss E. Beldon. Second, R. Jessop, Hull. *ANY FARMYARD CROSS, OR OTHER VARIETY NOT PREVIOUSLY CLASSED*.—First, R. Loft, Woodmansey, Beverley. Second, Miss E. Beldon. Third, E. Leech, Rochdale. *BANTAMS* (Game).—First, G. Smith, Staveley, Chesterfield. Second, G. Cutler, Malinbridge, Sheffield. *BANTAMS* (Any other variety).—First, F. R. Pease, Southend, Darlington. Second, Miss E. Beldon. *TURKEYS*.—First, F. R. Pease. Second, Mrs. Legard, Poppleton. *POULT*.—First, Mrs. E. Hick, Healdington, York. Second, E. Leech, Rochdale. *GESE*.—First, W. K. Duxbury, Leeds. Second, F. R. Pease, Southend, Darlington. *DUCKS* (Aylesbury).—First, E. Leech, Rochdale. Second, O. A. Young, Driffield. *DUCKS* (Rouen or any other).—First, J. K. Jessop, Hull (East Indian). Second, W. K. Duxbury, Leeds.

SKILLING CLASS (Any variety).—First, T. Hartley, Gomersall. Second, Miss K. Beldon. Third, W. Harker, Cottingham, Bingley.

EXTRA POULTRY.—Prizes were awarded, to F. Fowell, Knareborough, and T. Watson, Heworth, York.

Pigeons.—*Carrier Cock* (Any colour).—First, G. H. Sanday, Holme Pierrepont, Nottingham. Second, A. F. Leite, Manchester. *Hen*.—First, T. Colley, Sheffield. Second, F. Elze, Baywater, London. *Poster Cock* (Any colour).—First, S. Robson, Brotherton, Burton Salmon. Second, G. R. Potts, Sunderland. *Hen*.—First, H. Brown, Walkley, Sheffield. Second, H. Simpson, Newark. *Notta Tumblers* (Short-faced, any colour).—First, J. R. Jessop, Hull. Second, H. Yardley, Birmingham. *Tumblers* (Any other variety).—First, I. Todd, Newall-with-Clifton, Otley. Second, H. Simpson, Newark. *Fantails*.—First, E. Horner, Harewood, Leeds. Second, T. Hives, Cotgrave, Nottingham. *Trumpeters*.—First, Miss E. Beldon. Second, F. Elze. *Bards*.—First, W. B. Van Haansbergen, Newcastle-on-Tyne. Second, H. Yardley, Birmingham. *Jacobins*.—First, J. Thompson, Bingley. Second, G. H. Sanday, Nottingham. *Turbits*.—First, H. Yardley. Second, G. Fletcher, Acomb, York. *Owls*.—First, G. A. Sanday. Second, F. Elze. *Any other New or Distinct variety*.—First, O. A. Young, Driffield. Second, T. R. Trenam, Helmsley. *Selling Class* (Any breed).—First, J. R. Robinson, Sunderland. Second, H. Simpson, Newark.

Rabbits.—*Lop-eared Buck* (Any colour).—First, A. Cattley, York. Second, T. H. Ridpath, Rusholme, Manchester. *Doe*.—First, T. H. Ridpath. Second, G. Calvert, York. *Himalayan*.—Prize, J. W. Frier, York. *Dutch*.—First, S. Hall, York. Second, G. Jackson, York.

The Judges were Mr. J. W. Thompson, Southowram, near Halifax; Mr. James Smith, Walkley, near Sheffield; and Mr. Harry Adams, Beverley.

THE BRIGHTON POULTRY EXHIBITION.

We are not aware of any local poultry show that has so speedily won its way into public favour as that under the management of the Brighton committee. Although only three years have passed since its first institution, and though beginning in a very small way, its promoters were in no wise disheartened. Last year great progress was evident, and the exhibition just concluded was quite equal to the best of local meetings of this character. We trust so satisfactory an issue may conduce to similar exhibitions in the surrounding districts being speedily restored to the high position they held some ten years ago; for the falling off in the number of shows in the south of England is certainly rather to be attributed to the supineness of committees than to any indisposition on the part of either the general public or exhibitors to support them.

The exhibition at Brighton proved a most successful one in coloured *Dorkings*, the specimens exhibited by the Marchioness of Bath being such as would be highly creditable to any show. The chickens were peculiarly fine and well-grown birds, the best for their age we have this year met with, and there is not much reason to doubt that we shall speedily hear of them again at the head of other prize lists. Some good specimens were shown in the class for the best coloured Dorking cockerel, but from some cause or other several old birds put in an appearance, that, of course, met with instant disqualification. Exhibitors cannot possibly be too careful in consulting their prize schedules before entering, as no two lists are probably alike, and the conditions they impose must necessarily be enforced to the letter. The *Game* classes were decidedly the least perfect of any in the showyard, and the entries were unusually limited. Black *Spanish* were good, but had barely recovered from moulting. The best feature in the Brighton Show was the *Brahmas*, of which twenty-seven pens were on the spot. It is not beyond their desert to say that this collection was quite equal to any we ever saw at even the largest of our poultry shows. The excellence of these birds throughout, whether dark or light coloured, was so remarkable, that they formed the chief attraction of the meeting, and never was competition so severe. The *Cochins* were not a large nor a very perfect class; but the *Hamburghs* were particularly fine, especially the Golden-pencilled ones. The *Polish* were also good. In *Game Bantams* there was a good display, Mr. Kelleway, of the Isle of Wight, taking the chief honours with uncommonly neat and beautiful specimens. Mrs. Seamons, of Aylesbury, took her accustomed place in the prize list, her best pen of three birds weighing 27 lbs.

The *Turkeys* and *Geese* were well represented, and the Show was favoured with a first-rate attendance, the weather being quite summerlike.

DORKINGS (Coloured).—First and Second, Marchioness Dowager of Bath. Worthing. Third, A. Stanford, Eatons, Steyning. Highly Commended, Marchioness Dowager of Bath; W. Stanford, jun. Commended, A. Stanford. *Chickens*.—First and Second, Marchioness Dowager of Bath. Third, T. Roper, Barham, Suffolk. Highly Commended, Marchioness Dowager of

Bath; A. Stanford. Commended, G. Hudson; Sir P. Burrell, Bart., M.P.; — Hawes, Hayes, Horsham. *Cockerels*.—First, A. Stanford. Second, Rev. J. G. A. Baker, Biggleswade. Third, Marchioness Dowager of Bath. Highly Commended, Sir P. Burrell, Bart., M.P.

GAME.—First, Rev. T. C. Hose, Little Wymondley, Stevenage. Second, H. Gorringe. Third, G. Boniface, jun., Ford, Arundel. Commended, H. Gorringe. *Chickens*.—First, G. Boniface, jun. Second, G. W. Ranwell, Portsea. Third, W. J. Pope, Biggleswade, Beds. *Sweepstakes Single Cocks*.—First and Third, G. Boniface, jun. Second, H. Gorringe.

SPANISH (Black).—First, J. H. A. Jenner, Lewes. Second, R. Wright, London. Third, Rev. J. de la S. Simmonds, Winchester. *Chickens*.—First, E. Draper, Northampton. Second, A. Heath, Calne, Wiltshire. Third, W. B. Bull, Arundel. Highly Commended, W. R. Bull. Commended, O. E. Cresswell, Hanworth, Hounslow; Rev. J. de la S. Simmonds.

BRAHMA POOTRA.—First and Third, Marchioness Dowager of Bath. Second, C. Cork, Shoreham. Highly Commended, Marchioness Dowager of Bath; Rev. T. C. Hose, Stevenage; W. L. Barclay, London; R. Ede, Worthing. Commended, Marchioness Dowager of Bath; J. Pares.

COCHIN-CHINA.—First, T. W. Russ, Hastings. Second, Mrs. M. Seamons, Third, Mrs. Prescott. Highly Commended, F. Zurborst, Donnybrook.

POLISH (Any variety).—First, J. Hinson. Second, — Edwards, Lyndhurst. Third, D. Mutton, Brighton.

HAMBURGHS (Gold-pencilled or Spangled).—First and Second, F. Pittis, jun., Newport. Third, — Hunter, New Malden, Surrey. Highly Commended, G. Edgar, Lancing.

HAMBURGHS (Silver-pencilled or Spangled).—First, Marchioness Dowager of Bath. Second, — Pyne, South Lancing. Third, — Saltmarsh, Chelmsford.

BANTAMS (Any variety).—First and Second, J. Kelleway, Merston, Isle of Wight. Third, F. Pittis, jun. Highly Commended, Hon. F. Petre, Brentwood. Commended, E. Pigeon, Lympstone, Exeter.

ANY VARIETY NOT PREVIOUSLY MENTIONED.—First, F. Zurborst, Donnybrook (Sultans). Second, — Cocher, Salisbury (Malay Pheasant). Third, Marchioness Dowager of Bath (Silkies). Highly Commended, — Edwards, Lyndhurst (White Dorking); J. Willett, Lewes (White Dorking); E. Pigeon, Lympstone (La Flèche); Mrs. Brassey, jun. (Creve Cœur). Commended, J. Pares, Chertsey (Andalusian); J. Hinton, Hinton, Bath (Malays); Marchioness Dowager of Bath (Silkies).

GENE.—First, Mrs. Seamons, Aylesbury. Second, — Barclay (Toulouse). Third, Sir P. Burrell, Bart., M.P. Highly Commended, T. Poole, Brighton (Spaniah).

DUCKS (Aylesbury).—First and Second, Mrs. M. Seamons, Hartwell, Aylesbury. Third, — Willett, Lewes. Highly Commended, — Parlett, Chelmsford.

DUCKS (Any other variety).—First, W. Stanford, jun (East Indian). Second, J. Adams, Fareham. Third, Marchioness Dowager of Bath (Rouen). Highly Commended, — Barclay; Marchioness Dowager of Bath (Rouen). Commended, Sir P. Burrell, Bart., M.P.; E. Pigeon, Lympstone (East Indian).

TURKEYS.—First, Lady Macdonald, Liphook, Hants. Second, Miss Milward, Third, W. Newland, Broadwater. Highly Commended, — Humphrey, Ashington.

PIGEONS (Dragons or Carriers).—First and Second, E. Draper, Northampton (Carriers). Third, — Cork, Shoreham (Blue Dragons).

PIGEONS (Any other variety).—First, Dr. Gream (Pouters). Second, — Bunce, Walworth (Black Mottled Tumblers). Third, A. Middleton, Newport (Turbit). Highly Commended, — Bunce, (Almond Tumblers); — Amore, Brighton (Ascola). Commended, — Amore (Norman Black).

James Turner, Esq., of Chyneton, Sussex; and Edward Hewitt, Esq., of Sparkbrook, Birmingham, officiated as the Judges.

CREVE CŒUR FOWLS.

For two seasons past I have kept Crève Cœur fowls and have raised a large number of chickens. My stock birds were all prizetakers, carefully matched for breeding, and the runs they and the chickens were on had done well for Cochins and Hamburghs. But almost without exception I find the tails, especially of the male birds, wanting in firmness and hardness of feather, so that they are very apt to break and so spoil the appearance of the birds.

I have noticed the same bad tails in birds of this breed raised by other breeders, in imported birds, and even in some that were exhibited at the Birmingham show; and a defect of this nature would be a strong objection to the keeping of a breed undoubtedly very valuable as egg-producers and non-sitters.—W. B., Lancashire.

[We have kept them largely, and have not noticed the peculiarity named by our correspondent. They are by no means hard-feathered fowls. The La Flèche are before them in this particular.]

AWARDS AT THE SOUTHAMPTON BIRD SHOW.

You will very much oblige by contradicting the statement made by Mr. Taylor, of Portsea, respecting my dissatisfaction at the awards at the late Southampton Show. I am perfectly satisfied with the Judges. When the case of Mr. Triggs' bird was brought before me I stated that his bird, as he then appeared, certainly looked the best bird, but adding, doubt-

less when the Judges went round the bird may have been out of condition.

I agree with Mr Taylor that more time should be allowed for judging such as the Palace Show, where there should be a day expressly for judging, and the birds should be at the Show a whole day previously, as many of them come a long distance, and are so exhausted that it requires a day for them to recover.—THOS. MOORE, *Fareham*.

DUCKS LAYING BAD EGGS.

THE Duck was hatched last spring, and commenced laying about ten days ago, and has laid half a dozen eggs and every one of them bad. The whites are bluish, and the yolks are the colour of a sponge, or, if anything, a little darker.—W. Y. M.

[It may be the result of disease or of improper food. Such things do sometimes happen with first eggs; and if you cannot attribute it in any way to the former causes, we think we may safely tell you that a little patience will probably be the cure.]

SITTING HEN EATING HER EGGS.

IN answer to "J. W.'s" question respecting the hen eating her eggs when sitting, I can say I had one that did so last year. She is a very good hen to lay, and I did not wish to kill her, so I thought I would try to remedy the evil. She used to keep on her eggs for two or three days together, and that was when she ate her eggs. So I thought it was hunger, and I made it a practice to turn her off every morning at feeding time, and I then found she ceased to eat any eggs. I think your correspondent will find that this propensity is caused by hunger through remaining on the nest too long.—ELWOOD.

THE RECENT MILD WEATHER—A CAUTION.

TO-DAY has been quite like summer—the sun very warm, scarcely a breath of wind stirring. My bees (five stocks), have been out of their hives quite as numerous as on many days in September. I am afraid it is a bad sign, but should like to know if any of your correspondents have found their bees do the same.—J. W. T., *Wandsworth*.

[Permit me to address a word of caution to the apian readers of THE JOURNAL OF HORTICULTURE. The recent mild weather appears to have stimulated a very rapid consumption of the stores in hives intended to stand the winter. I am almost ashamed to confess that I have already lost a fine stock from sheer starvation, but I deem it right to make my misfortune public as a warning to others. I made up all my stocks to what I deemed a sufficient weight in October, and was quite taken by surprise at finding, only two months afterwards, one dead of starvation, and some of the others so light as to necessitate prompt measures to save them from the same fate. The consumption of food by my bees this autumn has certainly been remarkably great, and it has very probably been the same with others. The appearance of this note of warning may save some of my brother apianists from a similar misfortune to that experienced by—A DEVONSHIRE BEE-KEEPER.]

BEEES REGICIDAL—DRIVING BEES.

SOME time ago "A DEVONSHIRE BEE-KEEPER" asked the readers of THE JOURNAL OF HORTICULTURE if any explanation could be given by them as to the strange aberrations of regicidal attacks on queens. Now, I dare not venture to explain the cause; but, nevertheless, it does not hinder me giving a few hints of what has come under my own observation. It is a well-known fact that at swarming time bees, which intend doing so, often try to take possession of any weak hives that may be near, and succeed in doing so. The first thing they do after they do gain admittance is to kill the queen. This I have often seen. Since the introduction of the Ligurian bees into this locality they have shown their thievish propensities by attacking both the black bees and the weak hives of their own race. About

a month ago, one day, after feeding a Ligurian hive, my attention was drawn to a black hive, and I saw numbers of Ligurians marching in and out just as if they were at home, and on drawing the shutters and taking a peep at the interior, there were the yellow bees nibbling away at the black at the very top of the hive, and in a few hours the queen was thrown out dead. Might it then not be strange bees that killed the queen, and not her own subjects? as they, being weak hives, might be easily overcome, and the queen on her return could be easily made captive by a few strange ones.

I see that "C. D., *Sheffield*," complains that it is with difficulty that he can induce the bees to leave wooden hives. For my part I never found any difference if the weather was at all favourable. I have often driven them in winter when necessity required, and instead of cutting-out combs and brushing the bees into an empty hive when I found them a little dilatory, I simply tied a thin muslin cloth or such like over the mouth of the inverted hive, and placed it before a fire, not too near, for a short time, and then I accomplished my end easily.—A LANARKSHIRE BEE-KEEPER.

A NEW BEE BOOK.

THE question has been asked, "Is a new bee book wanted?" In these days of rapid book-making, there is a great lack of originality, a new book too often proving but old material dressed up in a new form, and from a want of practical knowledge of the subject treated of, the compiler is apt to introduce absurd errors and exploded theories, of which style "Bee-keeping, by the *Times* Bee-master" may serve as an illustration, and of such books we have certainly no need.

But there is a want felt amongst apianists generally, of a thoroughly original and practical work on bee-keeping at a moderate cost, embracing what was useful and well established in the past, together with all the more recent discoveries and improvements. The acquaintanceship of "A DEVONSHIRE BEE-KEEPER" with the bee literature of his own and other countries, and, above all, his extensive practical experience of both the British and Italian bee, long ago induced me to express to himself the hope that one day he might be induced to favour us with what I felt sure would prove a standard work on the subject, "the right man being in the right place." This hope it affords me the greatest pleasure to find is about to be realised; and as the knowledge of our interesting little favourites progresses, that he may be spared to put it through many editions, is, I feel sure, the sincere wish of all the readers of the apian corner, as well as of—A RENFREWSHIRE BEE-KEEPER.

OUR LETTER BOX.

WARNING FOWLS—HARDENING PLUMAGE (*H. S.*).—If dirty the birds should be washed, and not more than two days before they go to the show. Peas or small beans will harden a cock's plumage—raw yolk of eggs will do the same.

FEATHERS OF SPANGLED HAMBURG PULLETS (*Golden Hamburg*).—If you sell all the Spangled pullets that have a few white spots you will be likely to sell all. They all have them under the belly and towards the tail. We do not consider them at all important there. We should think them a defect on the chest or back. The first-prize Birmingham birds were very good in our opinion. We should not consider a few white spots sufficient reason for discarding a hen. Their belly plumage is commonly coloured to hide the white spots.

BIRMINGHAM PRIZE LIST.—In the coloured Dorking chicken class Mr. E. Lang, jun., The Shrubby, Redland, Bristol, should have appeared in our list as the owner of a highly commended pen.

COCHIN-CHINA COCHNEEL (*W. H. Wheeler*).—The thumb mark in his comb is not of the slightest consequence in a stock bird.

MICE IN AN AVIARY (*Joy Hedge*).—The best means of getting rid of the mice is by poison placed outside of the aviary, provided it is not used carelessly and poison something besides the mice. We have known many small birds killed by mice during the night time. Phosphoric paste is the best, but it must be used very carefully. If the aviary stands by itself six 18 inches high round the bottom will prevent the mice getting in; but if it joins a wall or building then the wirework should be made close, so they cannot get through.

BREEDING LIGURIAN BEES (*A. L. B.*).—We should suspect some taint of the common black bee in a Ligurian queen that bred only very dark workers with but one orange-coloured band, and we would not breed queens from her unless compelled to do so in the absence of a better.

REMOVING A HIVE TO A DISTANCE (*H. A. H.*).—Secure the hive, one of Neighbour's improved cottager's, with windows, firmly to its floorboard, cover the entrance and the holes in the top of the hive with perforated zinc; tie a cord round it, do not trust it in the hands of railway porters, and let it travel in the same carriage with yourself.

WEEKLY CALENDAR.

Day of M th	Day of Week.	DECEMBER 20—26, 1864.	Average Temperature near London.			Rain in last 37 years.	Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock after Sun.	Day of Year.
			Day.	Night.	Mean.								
20	Tu	Sun's declination 23° 27' S.	44.0	33.7	38.9	13	6 a 8	50 a 3	58 11	32 11	21	1 56	355
21	W	St. THOMAS. Shortest Day.	43.4	33.7	38.6	14	6 8	51 3	morn.	42 11	6	1 26	356
22	Th	Furze flowers. [menced	44.9	33.0	38.9	18	7 8	51 3	2 1	3 0	23	0 55	357
23	F	Great frosts of 1794 and 1829 com-	44.2	32.0	38.1	20	7 8	52 3	5 2	28 0	24	0 25	358
24	S	Moles throw up hillocks.	44.0	31.4	37.7	16	8 8	52 3	10 3	53 0	25	before	359
25	Sun	CHRISTMAS DAY.	43.5	28.8	36.1	9	8 8	53 3	16 4	30 1	26	0 35	360
26	M	St. STEPHEN.	42.7	31.3	37.0	12	8 8	54 3	21 5	11 2	27	1 4	361

From observations taken near London during the last thirty-seven years, the average day temperature of the week is 43.8°, and its night temperature 32.0°. The greatest heat was 68° on the 25th, 1837; and the lowest cold, 4°, on the 24th, 1860. The greatest fall of rain was 1.15 inch.

THE FILBERT AND COB NUTS.



WITH the exception of the Grape Vine there is no fruit tree with which I am acquainted so much indebted to pruning for rendering it fruitful as the Filbert. I believe that I do not exaggerate when I state that the severity with which this tree is cut in exceeds even that by which the best Grapes are generally obtained. Such severe mutilation would very quickly cause disease and death in a tree less robust and less tenacious of life, but the Filbert endures all for many years, and rarely succumbs, some plantations being quite fifty years old, although other reasons often afford a cause for removing them before that time. Filberts are often met with as a sort of undergrowth to fruit trees of larger dimensions, as standard Apple, Pear, Plum, or Cherry trees; but they are also frequently allowed a plot to themselves, and certainly, where the soil and other circumstances favour their growth, they well deserve a place where they will not be interfered with by other trees.

I believe it is generally admitted that the Filbert and Cob Nuts are importations from the Peninsula or some other district in central or southern Europe, and not a native improvement on the wild Hazel Nut of our copses and woods effected by long and persevering cultivation, as the Apple and Plum may have been. The economical value of the latter fruits being greater than that of the Nut, the desire to effect improvements was, no doubt, more earnest in their case than in that of the Nut, which was most probably regarded as a luxury. Dismissing that subject, however, I may remark that the same soil and situation in which the wild Hazel is found appears to be the best for the cultivated varieties—namely, hilly stony districts, neither too dry nor too wet, and of which the subsoil is penetrable by the roots of this and other trees. On such a soil is found the wild Hazel, and on such, too, the cultivated Cob and Filbert thrive the best. The aspect does not seem to be of so much consequence, as Filbert grounds are found in declivities facing all directions, not the least productive being those with a western aspect, while plenty having a northern one are equally successful; but all aspects are under this crop, and now and then a plot nearly level is met with. Generally hilly places are put under this crop after having been trenched, and part of the stones taken out. The heavy loam of low lands which produce the best Wheats does not appear to answer so well for the Filbert, and a drier position should therefore be selected.

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The Filbert and Cob are propagated plentifully enough from suckers at the root, which are generally bedded in some nursery ground for a year or so before finally planting out, and they are headed down to within a foot of the ground, to obtain a series of branches radiating at that height, which are so cut and arranged as to form the skeleton of the future tree. This, when full grown, in some respects resembles a basin in shape, the centre being hollow, and the outer edges about 5 feet from the ground, the diameter being 12 feet or so. Where there is a large number of trees together, and they are carefully planted in lines at 12 feet apart each way, and trimmed as they usually are, the upper surface of the rim of each tree is an exact counterpart of its neighbour, and the eye of the observer passes over the whole in a line parallel with the ground. Each tree is cut as exactly at a certain height from the ground as corn usually is, and the only difference is that the Filberts are 5 feet from the surface, and the stubble only a few inches.

The mode in which the Filbert is trained might, perhaps, be very well copied in the case of other trees. The young tree, as already stated, is cut down so as to obtain a quantity of shoots at less than a foot from the ground, which are so cut as to secure others continuing to spread in all directions from the centre with so little rise that at the radius of 5 or 6 feet their tops may not be higher than at most 5 feet from the ground. This pruning and training, however, is the work of years, and while it is progressing lateral branches pointing in the same direction are left on and encouraged, taking care that whatever young wood is allowed to remain for such a purpose should be neither too strong nor too weak, the former only producing its like, and the latter being too insignificant to expect much from; but of the two extremes the latter is by far the preferable. Some other peculiarities in pruning are also well worthy of notice, and might, perhaps, be copied with advantage elsewhere. It is well known that the Filbert and Cob (both being alike in that respect), push shoots 6 feet long and upwards. These rampant shoots are sometimes situated where a branch is wanted, or where it would be imprudent to remove them entirely; and to cut them back with the knife in the usual way would only be to encourage another of a like kind from the one so operated upon. In cases of this kind the knife is laid aside, and a rough-toothed saw is used to cut through the shoot, leaving it in as haggled a condition as it well can be, and this coarse operation assists in checking the tendency of the same branch to produce other vigorous shoots; while all small shoots are shortened in by the knife in the same way as those of other fruit trees, the portion left rarely being more than 3 inches at any place, and often less in the full-grown tree. Neither are the main and subsidiary branches at all close, the practice being to get a few (what might appear), gnarled, ugly, stumpy branches with a few spurs on equally uninviting to look at; but the practised pruner can tell tolerably well by the appearance of the tree which are fruit-bearing spurs and which are not, although it is difficult to explain how on

No. 847.—VOL. XXXII., OLD SERIES.

paper. In general such shoots are small and short-jointed, and about the end of January, if the winter has not been unusually severe, small pink spots will appear, showing through the bud, these are the female blossoms, and form the embryo of the fruit; the male blossoms are expanded, and hang in catkins months before these appear. It is, therefore, better for those unacquainted with this tree not to begin to prune until these tokens of fruitfulness can be seen; at the same time it is not prudent to delay it too long, as they are easily rubbed off, and all prospect of fruit is then gone.

The female blossoms though expanded long before settled fine weather, are, nevertheless, tender, and easily injured by frost, and, therefore, a declivity facing the west is often thought to be the best, as the frosts of spring are often gone ere the sun can shine, and thus they escape injury. Overhanging Apple trees are likewise not altogether without their use, as they afford a little shade and shelter, so that large breadths of these trees and Filberts are planted together, while in not a few instances there is a crop of Hops overtopping the Filberts for some years; but this latter plan is not considered of any benefit to the Nuts, but is merely adopted to obtain the most from the ground. Gooseberry and Currant trees are by far the most common accompaniments, they being invariably planted to occupy the spaces between the Filberts while these are progressing. Assuming the latter to be planted at 12 feet apart each way, the small fruits might be 6 feet, or if the Nuts are 10 feet apart, the latter would be 5; so that for every Cob or Filbert there would be three Gooseberry or Currant trees, unless the latter or the Nuts were intermixed with standard Apple or other trees, which are often 20 feet or more apart. Generally, however, the ground is heavily cropped from the beginning, and it is by no means unusual to see Currants, Filberts, and Apple trees all growing together, the last overtopping the former two, and scarcely a speck of ground to be seen. It is very rare that a Filbert is seen on grass land, the opinion being that the tree derives advantage from tillage; and, on the other hand, as the Cherry is said to be injured by this, a Cherry orchard is generally laid down in grass. Such is the Kentish custom, and a long course of culture based, no doubt, on practical observations has determined this course to the best in both cases.

Of the varieties most esteemed by the grower it is difficult to say much, the demand pointing out the kind most proper to grow; but there is little question that the quantity of Cobs now grown far exceeds that of Filberts, and that the culture of the former has been on the increase for many years, whilst that of the latter has been decreasing, few young plantations of these being made. The varieties of both are very limited in number as compared with those of other fruits. Sometimes when a grower has a reputation for fine fruit a local name attaches itself to the variety he cultivates, although in all probability no real distinction exists. However, there are some inferior kinds, and these it would be proper to weed out. Subjoined I give the names of a few, to which, doubtless, others might be added.

Common Cob.—I believe a much harder-shelled one than this is found in other counties, as the kind now called the common one is the same as Lambert's or Kentish Cob elsewhere. A good Nut, producing excellent clusters, with a large full kernel. I may mention that, for experiment, I once weighed a quantity of average quality, including the husks, as they were, and had them cracked, and then weighed the kernels alone, and these were found to be a trifle more than half the weight of the whole, and, therefore, the reader may form an idea that they were pretty full. The shell, however, is harder than that of the Filbert and improved Cosford Cob, but the kernel keeps better than the latter, and is equal to it in flavour.

Cosford Cob.—This only differs from the last in being thinner-shelled; as regards bearing it is much the same, and except that the common Cob keeps fresh longer, there is not much difference between the two.

Spanish Cob.—The distinction here is so questionable that it is doubtful if the Kentish and Spanish may not be synonymous. There are also other names, having reference to localities where large quantities are grown, but it is impossible to describe them as being applied to distinct varieties.

Red-skinned Filbert.—This is by many esteemed the finest

Nut grown, and for a month or more after gathering is unquestionably so, and most people admire it during that time. It does not, however, keep so well as the Cob, and, as a plant, is less prolific, or, rather, is more tender. A few plants, however, ought to be in every collection.

White or Common Filbert.—This is more hardy than the last, and bears better; it is also a very good nut.

Friszled Filbert.—The husk which encloses the nut being fringed at the point has given this plant its name. As a curiosity it has its admirers, and the nut is also good, though not better than those above mentioned; but the peculiarity of the husk gives it a claim to notice.

Besides the above there are many others perhaps, with which I am but imperfectly acquainted. One variety is grown for the tint of its foliage resembling that of the Copper Beech, and is called the Purple-leaved. I believe, however, that its fruits are little, if at all, better than common hedge Nuts, its merit resting solely on its foliage. There is also said to be a Dwarf Prolific of high reputation, and which doubtless deserves notice, but not being acquainted with it I cannot speak of its merits. Possibly, however, other growers from localities equally favourable to the growth of Nuts will give us the benefit of their experience. There is no fruit that I am acquainted with of which the cultivation seems to be confined to so few districts as this. Assuredly the soils and situation suitable for it are more generally to be found than is commonly supposed, and there seems to be no reason why it should not be tried in many places in which there is every prospect of its succeeding. J. ROSSON.

HARDY FERNS:

HOW I COLLECTED AND CULTIVATED THEM.—No. 6.

ALL my Fern journeys were not made in the shape of tours, where public conveyances and public inns threw one with a mixed society, giving to one's thoughts and associations a diffuse itinerant character. Some journeys there were, taken in choice companionship, which stand out clear and bright in my memory like sunlight on a hill, marking each blade of grass, each tiny flower, with a distinct existence of its own; so that I can say, "As I gathered this leaf my thoughts gathered round some subject, made clear to me for the first time by the light of the genius of my friend;" or, "As I uprooted this Fern a long-cherished prejudice was uprooted with it."

Insensibly in my mind certain Ferns have become the embodiment of certain graces; they act upon me as monitors, reminding me of voices passed away that I never heard save in tones of love and charity, luring me on to a life of truth and beauty open alike to all.

Amongst my brightest representative Ferns is the *Ceterach officinarum*. I have never found any difficulty in cultivating *Ceterach*. Although it is a little wayward in the choice of its own habitation, yet where it does grow the walls will be full of it, every niche and corner adorned by its prettily crimped fronds—now shining green, now russet brown, as the sunlight may fall. I have usually found *Ceterach* growing on old stone walls, where a good deal of lime has been used in the mortar. In this position the fronds do not attain any great luxuriance, and are often so curled that only the brown mass of spore-cases at the back is visible. It is sometimes to be found on rocks, and in this situation the fronds will reach 6 or even 7 inches in length, while the full fructification will form a little border of brown fur on the outer side. Whenever I look at *Ceterach* it seems to whisper to me—

"He prayeth best who loveth most
All things both great and small;
For the dear God who loveth us,
He made and loveth all."

Bound on a pilgrimage to Clevedon in Somersetshire with a friend whose life taught me the spirit of the ancient mariner's rhyme, we stopped at the little village of Ashton near Clifton, and there, abounding in profusion, we found *Ceterach*. All the lower parts of the walls had been cleared by wayfarers like ourselves; but high above it hung out its green banners too temptingly to resist. We tried to reach it in vain. Old women in white, full-bordered cap, and neat kerchief, came out to look. "Would miss like a chair and

a knife?" Thus armed "miss" was invincible; and under the smiling protection of the old women she scooped out brick and stone, and a basketful of healthy plants, shortly to be put on the lower tier of the Warwickshire fernery. At La Spezzia in Italy I found a diminutive form of *Ceterach*, which might be called pinnate. It was growing on a rock within a few yards of the tideless sea, facing the glorious bay, where a whole fleet could ride at anchor. Nothing could exceed the grandeur of that Spezzia bay on a clear Sabbath morning in autumn, a cloudless sky overhead, and the deep blue waves breaking into white ripples about the huge men of war, whose gay pennons bespeak their nation. Eight-oared boats are passing from the ships to land, bringing, it may be, some of their crews to join the motley throng of worshippers gathered in the cathedral to hear mass. Some of the women kneeling there have white linen folded like dinner-napkins on their heads; others have the Spezzia hat—like a little cheeseplate, made of fancy straw, and trimmed with scarlet braid; others, again, have the Genoese headdress—a gay cotton shawl like a counterpane, wrapped round them, covering the head. Some are talking, some laughing gaily, but at the elevation of the Host every sound ceases, and every knee is bowed in adoration. Yes, there are some things revered in Italy—reverenced by rich and poor, by men and women, by everybody everywhere.

From the cathedral at Spezzia, by the help of the magic *Ceterach*, a slight transition takes me to the old parish church of Clevedon, where lies buried Arthur Hallam, the talented son of the historian Hallam, and the "A. H. H." of Tennyson's "In Memoriam"—the noblest monument that man's love ever raised to man, on which Mr. Tennyson lavished with the prodigality of boundless affluence the wealth of his intellect, the riches of his soul. We poorer mortals deck the graves of our beloved ones with simple flowers that perish in the using. It was for Tennyson alone to weave undying wreaths, each chaplet bright with the hues of Paradise and fragrant with the breath of love. As we stood by the simple marble slab placed on the grey wall of the old church, we marvelled what manner of spirit had animated the poor dust beneath our feet, capable of playing on the chords of Mr. Tennyson's inmost nature, and of awakening strains of such perfect harmony. As in memory I now recal that hour and the friend by my side, the name of Arthur Hallam fades away and another takes its place; but the beautiful Latin inscription, rendered in simple English verse by a loving hand still reads thus—

"Farewell, thou dearest, best beloved,
Torn from our longing eyes!
May we who mourn thee rest with thee,
With thee together rise."

I may not venture to describe Arthur Hallam's resting-place. We read in "In Memoriam":—

"The Danube to the Severn gave
The darken'd heart that beat no more;
They laid him by the pleasant shore,
And in the hearing of the wave."

As *Ceterach* is in my mind the embodiment of all that is pure and enduring in friendship, so *Botrychium lunaria*, or the Moonwort (occupying, like *Ceterach*, a separate niche in Ferndom), represents all that is capricious and unstable. It is not that *Botrychium* gives you back black looks for your care: on the contrary, it repays you with an appearance of the most felicitous enjoyment. It seems to revel in the change of air; its round little pinnæ look fatter; its tiny spike of fruit looks richer. You flatter yourself that at last you have your friend safe; but lo! in the spring when you look for him he is gone—utterly gone. *Botrychium* can hardly be called a rare Fern, for it has a very wide distribution; but its minute size and peculiar habit render it difficult to find. Its bright green fronds are the colour of the rich meadow land in which in Shropshire, Herefordshire, and other counties it is to be found. In any situation it requires a keen eye to hunt it out. One of its loveliest haunts is on Haldon Hill in Devonshire, where, in the months of May and June, it grows freely on the richer portions of the soil.

When it opens its dewy eyes in the early morning of spring what a panorama of beauty and glory dazzles them! Hills, bright with the green of early corn, sloping down to

pretty farmsteads, nestling in orchards wearing a rosy veil of bloom. Beneath the undulating hills, stretching far away, the boundless expanse of ocean, over which the advancing sun makes a pathway of light; and as he comes up on his royal way, beacon after beacon on the grey range of the Dartmoor Hills (which have been, as it were, a pillow for my Fern), proclaims to the yet sleeping world that the day god has arisen. On the right hand and on the left beauty—beauty of tree and flower—beauty of hill and dale—beauty of rock and river—and beauty exceedingly glorified of ocean, girt on either hand by ruddy rocks boldly advancing into the angry waters or retiring far back, leaving a gentle sweep of bay, where ocean-tossed mariners find rest, and from whence the fisher's boat puts out in safety.

Happy *Botrychium*, bred up in scenes like this! No wonder you say to yourself when I ruthlessly dig you up with my iron spade (the fibrous roots making a trowel useless), "One woman may dig me up, but twenty shan't make me live." I never have made you live, and I fear I never shall. I treat *Botrychium* like an annual, and transplant it yearly to the fernery; but I do not care for it. It has but one form of beauty, and that is short-lived, and you see it all at once. It comes up short and stumpy, just where it pleases—it won't be put out. It waves over no broken stone, it adorns no tempest-beaten tree. If you transplant it, it dies; if you leave it, at the first hint of winter it perishes. Often and often I have wished it might be banished my favourite kingdom, and consigned to the land of "Lords and Ladies," to which, in spite of all botany, I believe it more than half belongs.

Ophioglossum grows on Haldon, not far from *Botrychium*, which it much resembles in its habits. In the lanes leading to Haldon I have found *Adiantum nigrum acutum*, the variegated *Adiantum*, a curious variety of *Polypodium vulgare*, having each pinnule cleft at the end, *Trichomanes*, *Blechnum spicant*, &c.; and in the gullies, the giant *Filix-mas*, and *Lastreas dilatata* and *spinulosa*.

Lastrea thelypteris has also found a home on beautiful Haldon. The spot it has chosen is a green swamp in the midst of the everlasting hills. The fronds make their way through reed and briar up to the fair sunlight, and sometimes will measure a yard and even more in length. *Thelypteris* is exceedingly troublesome in cultivation from its creeping habit, and I should recommend it to be placed at the back of the fernery, where there would be the greatest amount of shade and damp, and where it would be out of your way. Growing wild, *Thelypteris* is not without beauty, but in cultivation it has nothing particular to recommend it. The fertile fronds have no decided character of their own, but look like a common frond, ill-grown and faded. Its chief interest is the difficulty of getting it out of its treacherous lurking-place, so green and safe in appearance, so unsubstantial in reality. Bogland abounds in beauty. The Golden Asphodel is there, and the little pink Pimpernel, and there the Sundew lifts up its white blossoms to the early sun; and while you search for these and other treasures, the startled kine turn round and look at you with half curious, half doubtful eye.

Not far from Haldon on the Chudleigh rocks I have found a curious form of *Polypodium vulgare*. I suspect it to be a permanent variety; and though it is not yet cambricum, its pinnæ being narrower and its fructification more abundant, it approaches very near to it in some of the plants; and I look forward to cultivation improving its form and size, which at present is rounder and smaller than the true cambricum, the middle pinnæ being the widest.

I found my first wild *Osmundas* near Exmouth. They grew in an old forsaken orchard, where you took each step in danger of being swamped. The marshy nature of the ground suited these noble Ferns, and they grew up right royally on every side, their fronds waving in the breeze. I never saw more beautiful sunsets than there are at Exmouth. The painter Danby told me he made his home there on that account. He had made long wanderings, seeking for the beauties of the setting sun, and had found the concentration of all he sought for at Exmouth. Shortly after Danby told me this the curtain of night fell on the painter, and his own sun set for ever.—*FILIX-FEMINA*.

[Editors always assume the privilege of correcting evident mistakes in the contributions they receive; and they noticed

in the last communication from "FILIX-FEMINA" that she had, in the hurry of composition, made a confused statement about *Polystichum angulare* and *aculeatum*; yet the Editors hesitated, and finally refrained from altering what had come from a master's hand. They have had a pat from a velveted hand in consequence, accompanied by the following, to be substituted for the eight lines of col. 1, p. 448, beginning at the fourth line from the top:—

"The Warwickshire lanes abound in *P. aculeatum*. It may be found side by side in its varieties of *lobatum* and *lonchitidioides*, but the latter is more rare. *Polystichum angulare* is also to be found. *Aculeatum* may be known from *angulare* by the darker green of the fronds, by their stiffer habit of growth, and by the prickly nature of the pinnae. It is necessary to study both Ferns together to be able to decide with certainty at a glance which Fern is before you."

ROYAL HORTICULTURAL SOCIETY.

A SPECIAL general meeting was held on Tuesday, the 13th, to receive the report of the Council on the bye-laws. W. Wilson Saunders, Esq., was in the chair, besides whom there was only one other member of Council present—namely, Mr. Henry Cole, C.B. The attendance of Fellows was likewise very thin.

The CHAIRMAN said they were met together to consider the bye-laws, which, at the last annual meeting, were not considered satisfactory, and the Council at once took steps for their revision. A Committee was appointed for the purpose, and, their report having been adopted by the Council, it was now submitted to the Fellows for approval. They were much indebted to Mr. Thring and Mr. Bowring, who had taken much trouble in the matter, and it was mainly in consequence of their assistance that the Council were in a position to recommend the report for adoption.

As each member present at the meeting was furnished with a copy of the amended bye-laws, they were taken as read.

Mr. CHESTER then said that, incautiously, he had been involved in matters connected with the Society in the spring of last year, and had proposed a resolution requesting the Council to take steps to revise the bye-laws, and the Council had recommended him to be placed on the Committee appointed for that purpose. The position was not an enviable one, and, though he undertook it, he thought it would have been better if some one more conversant with the law had been appointed; and he did not know how the Committee could have accomplished the task without the assistance of Mr. Thring. He would now proceed to point out the chief differences between the new and old bye-laws. He did not say the new ones were perfect, but as much so as the Charter would allow of. In the new bye-laws a very large discretion was given to the Council. He would, however, recommend that body to take early steps for getting a new charter. By the new bye-laws candidates for admission as Fellows were only required to be recommended by two instead of, as formerly, by three Fellows, and these are not required to state whether they know the candidate personally, by report, or otherwise—their simple recommendation to be enough. Further, that the certificate of recommendation shall be suspended in the Council-room, be read at the next ordinary meeting, unless the name of the candidate has been previously published in the Journal of the Society, in which case the reading may be dispensed with; and that the election of the candidate shall be put to the vote at the next meeting, unless the Council sign a certificate recommending immediate election, in which case the candidate may be elected at the same meeting as that at which the certificate is read. Voting to be open or by ballot; in the former case a simple majority to be sufficient, in the latter a majority of two-thirds.

The next alteration of importance was with respect to the subscriptions. Formerly no Fellow more than one year in arrear was entitled to vote and exercise his other privileges; by the new bye-laws no Fellow whose subscription is in arrear is to be allowed to exercise his rights and privileges. Power is also given to the Fellows to remove any one of their body by the vote of a general meeting on four weeks' notice being given, stating fully the grounds on which the proposal

is made. The bye-law permitting the Council to re-admit a Fellow who has resigned to be omitted. With respect to honorary members, the number of which was formerly limited to ten, the number in future to be unlimited. With regard to the annual meeting, instead of being held at one o'clock, by the new bye-laws it is to be at eleven o'clock in the forenoon, or at such other hour as the Council may decide; eleven Fellows to form a quorum as heretofore, at an ordinary general meeting seven. He, Mr. Chester, had some doubt as to the legality of the rule admitting ladies to the right of voting by proxy; but he thought that, whoever he might be, he would be a very bold man who attempted to deprive the ladies of that privilege, and it was therefore continued in the new bye-laws. By the old bye-laws the ordinary method of voting was by show of hands, or calling the roll, when demanded by any two Fellows present, and in certain cases by ballot; whilst by the new bye-laws when the voting was not by ballot, it was left to the Chairman to determine the manner in which it should be conducted. Power was given to the Council to admit the public without payment on any number of week-days not exceeding three in each year. A provision was also now made for the admission of any horticultural societies and their members into union with the Society, and partial participation in its privileges. Section 74 was entirely new—it related to the education of gardeners. Soon after the recess a Committee had been appointed to take the subject into consideration. Sir Joseph Paxton had attended, stated his views, and given much assistance, and the result was that a report was sent into the Council, and, though publicity had not been given to the recommendations which it contained, he (Mr. Chester) believed he might state that it was under consideration. The new bye-law was as follows:—

"At the first meeting of the Council after the annual general meeting in each year, the Council shall appoint a Committee to be called the 'Education Committee,' whose duties shall be to advise the Council what measures they can take for improving the education of gardeners, and to assist the Council in taking such measures as the Council may approve for that purpose. One-half at least of the members of the Education Committee shall be members of the Council for the time being; and the Council at its discretion may from time to time appoint, remove, re-appoint, and vary the number of the members of that Committee."

Sections 82 and 84 provided that

"Any member of the Council may resign his seat to the Council, but such resignation shall not be deemed complete until it has been accepted by a resolution passed at the next ensuing annual general meeting, and the acceptance of any such resignation shall not be entertained by such general meeting unless the member proposing to resign has signed a paper in the form marked E in the Appendix, and has left it with the Secretary or Assistant Secretary on or before the 1st of January preceding such annual meeting."

"If any member of the Council dies, or becomes incapable from any cause whatever in the interval between any two annual meetings, the other members of the Council may fill up the vacancy so created by the appointment of some other discreet Fellow, and any Fellow so appointed shall for all purposes be deemed to occupy the position of the person to whose seat in the Council he has been appointed."

This was intended to prevent objections being raised to the validity of elections, as was the case at the last annual meeting, and, to prevent the possibility of doubt, notice of resignations was required in a particular form. The question which then arose was whether a resignation was to be taken as one of the three vacancies, or as being in addition to these. He himself thought the latter ought to have been the way; but this was only an instance of the difficulties with which the Committee had to contend, in consequence of the Charter and old bye-laws; and had it not been for the assistance of Mr. Thring they could have done nothing with the mass of confusion which existed, but by his aid they had succeeded in drawing up a clearer code of law to govern the Society. It was also thought desirable to introduce a bye-law to the effect that "no member of Council shall, at any exhibition of the Society, receive any money prize, medal, or pecuniary reward for any article belonging to him, or to any firm of which he may be a member, or in the profits of which he is interested."

The Committee had likewise proposed some alterations in the form of the balloting paper—[That the Council shall cause to be prepared, on or before the 15th of January in each year, two balloting papers, one stating the vacancies (distinguishing ordinary from extraordinary vacancies) created or expected to be created in the Council, and required to be filled up at the annual meeting; the other containing the names of such Fellows as the Council recommend to fill the offices of President, Treasurer, Secretary, Expenses Com-

mittee-men, and Auditors; these balloting lists to be circulated amongst the Fellows some time not later than the 15th of January. Further, that if any Fellow desire to substitute the name of any other Fellow for that of any one recommended by the Council for removal or election, such Fellow, within seven days after the balloting lists have been circulated, shall leave at the offices of the Society notice in writing of every such proposed substitution; that the notice of any substituted names shall be suspended in the Council-room, and circulated in or with the number of the Society's Journal published in February; and that if any balloting list contain any names other than those in the list recommended by the Council, or of which notice has been given in the prescribed manner, or if it contain more than the proper number of names, such list shall be deemed void, and not taken account of by the scrutineers.] The object of these provisions was to put it out of the power of a small body of the Fellows to determine on names beforehand, and so take the Council and Society by surprise. Last year the changes were only known in the Council, but by the proposed alteration Fellows would know what the composition of the Council was likely to be, and could deal with it. Thus there could be no surprise on either side—either on that of the Council or that of the Fellows.

With regard to the accounts, the new bye-laws provided for a report from the auditors.

Mr. Chester, in conclusion, suggested that this did not appear to be the occasion for criticising the position of the Society, although he believed that it would be competent for the meeting to do so, and he wished to impress upon the Fellows the importance of making as soon as possible any alteration they might think fit. He begged to move that the existing bye-laws be repealed, and the new ones adopted.

Major-General Sir ANDREW WAUGH, in seconding the motion, said that their thanks were due to the Committee and Mr. Chester for the pains they had taken. It appeared to him that the general principle which had guided them had been to give ample power to the Council, who were themselves responsible to the Fellows.

Mr. S. H. GODSON thought the new bye-laws should stand over for further consideration; if gone into *seriatim*, they would take two or three hours, and seeing the few members who were present he would move an adjournment for a month. He had stood alone in the Council on many matters, and that was not an enviable position. He had, though a member of Council, applied to see the accounts, and had been refused, and that was the reason he was standing on the floor merely as a Fellow of the Society, and not sitting with the honourable gentlemen up yonder, for in consequence of that refusal he had sent in his resignation to the Duke of Buccleuch, the President.

With regard to the new bye-laws they had been nine months at least in the hands of the Committee, and it was not too much to ask that they should stand over another month. It might be asked why he himself did not take an active part with respect to the revision of the bye-laws? and his reply was, that he was not on that Committee, though he should have been, had not Mr. Cole objected to it. There were several things in the new bye-laws to which he took exception; for instance, if, as was the case with Sir Daniel Cooper, their Treasurer resigned, they had no power under the new bye-laws to appoint another. He objected to the Council having more power than they already possessed. Had one member of Council the power of preventing another seeing the accounts? He was referred to Mr. Cole for permission to see the accounts.

The CHAIRMAN said he ought to state that he never knew Mr. Godson had applied to see the accounts and been refused.

The ASSISTANT SECRETARY said Mr. Godson must be under some extraordinary delusion. Mr. Godson had never asked to see the accounts. Mr. Cole had left some papers of his own, and he would not take upon himself to let Mr. Godson see them without Mr. Cole's consent being previously obtained.

Mr. COLE said if he did leave a paper, he had never refused Mr. Godson's inspecting any accounts. He (Mr. Cole) had left a paper at the garden with memoranda of accounts, and Mr. Murray (the Assistant Secretary) was under the impression that Mr. Godson's application referred to these, and not to the books of the Society.

Mr. GODSON—Very prettily put.

Some further remarks were then made, when Sir Andrew Waugh rose to order.

Mr. GODSON—I speak on the question of resignations. Under the new form of the bye-laws supposing a Treasurer to be appointed in the interval between the annual meetings, the appointment would be illegal, and all cheques signed invalid. He hoped that the mover and seconder of the motion before them would consent to an adjournment for another month.

Sir ANDREW WAUGH—If Mr. Godson had any objection to any of the bye-laws he might propose another, and they could debate it.

The CHAIRMAN—If Mr. Godson will move an amendment that would be the quickest way.

An amendment was then moved and carried—that any casual vacancy by death, resignation, or incapacity, should be filled up by the Council.

Mr. GODSON continued that a greater latitude was given to the Council than before. He would suggest that the whole of the names in the Council should be returned to the annual meeting, which would give the Fellows at large the opportunity of striking out any three, and that thus the Fellows would have the control; by the opposite course the power of introducing fresh blood would be nullified.

Mr. THRING regretted that it was utterly impossible to carry this proposition into effect. It would amount to ostracising; and he thought the proposed bye-laws only amounted to this—that the Council should have their list, and the opposition theirs. They might then fight it out fairly.

Mr. GODSON—Nothing could be more explicit than the old rule; but he told the Assistant Secretary again, that at the last annual meeting the resignations were given in previous to the election, because they were on the minutes of the Council. ["Time, time, time"]

Mr. GODSON—"Time!" He was much obliged to that gentleman who called "Time." He always tried to be in time; he was generally five minutes before his time; he was too soon for this meeting; he had been waiting for it ever since half-past twelve o'clock last night. The notice in his Journal was for 2 A.M., and he would have come there at two o'clock in the morning had not some friends persuaded him not to do so.

The ASSISTANT SECRETARY here said that Mr. Godson had a proof-sheet, and that was not the notice.

Mr. GODSON asked for the notice convening the meeting. It should have been read in the first instance.

The ASSISTANT SECRETARY said it was in the "Proceedings," and in one of the papers.

Mr. GODSON called for the notice.

Whilst the paper was being sought for, a Member thought there was a bit of quiet satire in bye-laws 81 and 83, by which it was provided that vacancies should be filled up by "discreet persons." He thought it would be better to assume that all were "discreet," and strike out the word. [Laughter.]

The CHAIRMAN then read the notice, published in THE JOURNAL OF HORTICULTURE of December 6th, convening the meeting.

Mr. GODSON—What paper are you reading from?

The CHAIRMAN said it was THE JOURNAL OF HORTICULTURE, one of those papers which are very well known, and circulate largely among horticulturists. Its circulation was as large, if not larger, than any paper of its kind, and horticulture was much indebted to it.

Mr. GODSON—And this Society has much to thank it for.

Some discussion then took place as to proxies; and Mr. THRING proposed that, Any Fellow holding proxies shall vote as such at a ballot, by annexing by whose appointment the proxies are given.

After some further discussion, it was moved by Mr. CHESTER, and seconded by Sir ANDREW WAUGH, "That the existing bye-laws be repealed, and the new ones adopted, with the alterations, amendments, and additions thereto;" and, this being carried, the same gentlemen moved and seconded, "That the meeting recommend the Council to take steps to get a new Charter."

Mr. GODSON said they had not £300 to spend on a new Charter.

The CHAIRMAN said the present Charter had been a stumbling-block in the way of the Society, and, on putting the resolution to the meeting, it was carried.

A vote of thanks to Mr. Thring, and the rest of the Committee on the bye-laws, was then carried unanimously; likewise a vote of thanks to the Chairman, Mr. Godson, in moving it, passing a high eulogium on the forbearance of the Chairman, than whom, whenever he occupied that position, no one could act with greater fairness.

DESTRUCTION OF THE INSECT SCALE.

I DESIRE to draw your attention to a discovery my gardener has made, for even if known before, I have never found it alluded to in any horticultural work, and on looking through your past volumes they throw no light on the subject. I allude to the scale on Orange trees.

I have a small Orange-house, in which I grow all the varieties at present in England that are good for the table, and until this year I have been enabled to keep the trees free from scale, or, at all events, so clean that a winter cleaning alone was sufficient. I always have heat in this house, and this season in the month of August (the early part of it), they were so dirty that my gardener took each tree out of the house, and they were cleaned most thoroughly. It was done by a small rose I had made for red spider on Peach trees under glass. I have a pressure of more than 100 feet of water, and its force immediately removed every scale, and when replaced in the house it would take ten minutes to find one scale. To my own, and my gardener's utter astonishment, the trees soon became as dirty as ever, the scale breeding nearly as fast as aphides. As I was going from home, I requested my gardener to do nothing with all hands until he had again thoroughly cleaned the Orange trees, as it really amounted to this: they must be kept clean, or their culture relinquished. With clean water, small brushes, and sponge, they commenced, and when I returned I found the cleaning not half finished; the insects were so numerous, that the time absorbed, with the greatest industry, was immense.

On my return, my gardener said, "I have found out how the scale breeds, and can account for their rapid increase. Last year we had some aphides in the house, and from several times fumigating we had little or no scale. I found a number of small black insects running over the Orange trees, and on those cleaned the day before they were as numerous as on those not cleaned." We at once fumigated and but slightly, and found it killed every insect. He then commenced examining some full-grown scale having a dark spot in the centre of the scale, with a magnifying glass. He found under the scale, in different stages, the identical sort of small black insects he had seen on the trees, and killed by smoke. He preserved some in a bottle for me to see, and he drew the conclusion that this is the male, the limpet-shaped scale the female, and that if you by regular fumigating kill the male, there will soon be no scale. This, I believe, to be the true version of the increase of scale; but to be certain there was no mistake, I found numbers of large scale on trees not yet cleaned, and with a magnifying glass in hand, I removed with a pin the female scale, and there found numbers (one under each scale) of the small black insect. I have found in books on the subject, since then that this is the male and female scale, but I have not found it in any horticultural work, or any suggestion, that the male is easily killed by smoke, and if you destroy them you certainly must prevent any increase.

I enclose you leaves with scale on them, and the male in different stages of growth, also some perfect ones, taken running about on the trees, and some from under the scale (in a small bottle). I have often removed the female scale when large and full grown, and with a glass seen hundreds of small ones run away, but I could never account for impregnation.

Because I have had so much scale on my Orange trees you must not imagine my place is not kept clean, as I can show Peaches of all kinds, fruit trees of all kinds, under glass and exposed, vinerias, &c., as clean as any in England. I should be glad of your reply, and you may make any use you like of this communication, but I am convinced, as an

old florist, that we have hit on the way to destroy scale, and hope it will afford as much benefit to others, as I fully expect to find myself. It also shows why Orange trees kept out of doors in the summer get clean of themselves, there is not continuous heat enough to bring the male scale to perfection, and if it hatch the cold nights either kill him or prevent impregnation. Mr. Rivers whom you know to be a very experienced man in these matters, finds it an entirely new light to him. — JAMES ALDRIDGE DEVENISH, *Rodwell, Weymouth.*

[We forwarded this communication and the specimens to Professor Westwood, and he replies thus:—"The preceding communication is another instance of investigation in the right direction not carried quite far enough, and, consequently, resulting in the not unusual error of friends being mistaken for foes, and beneficial insects destroyed instead of the real authors of the mischief complained of. The small, black, lively insects sent by your correspondent, and regarded by him as the male of the scale insects, are not such, they are parasites belonging to the order Hymenoptera, and genus Encyrtis, which feed in the larva state within the bodies of the scales, and, consequently, destroy them. Hence they are to be preserved and not destroyed. The real males of the scale insects are, as described in all works of entomology, and I presume also in all good horticultural works, minute, weak, six-legged, two-winged, creatures, slow in motion, with the bodies and wings clothed with a fine white powder. In out-of-door species of Coccidæ these males are developed at a fixed period of the year, and as they are very fragile they might be easily destroyed by fumigation attempted at the right time. In hothouse species I believe the generation of scales and allied insects is continuous, and that there is not a fixed time for the development of the males; but this fact is not proved. Investigation, where scales are prevalent, will easily determine whether this be so or not. If the males should be proved to be produced at one or two fixed periods of the year, there will be no excuse for the horticulturist if he do not clear his houses by destroying the males, and so preventing the production of future broods of young.—J. O. W.]

EARLY PEAS.

(Concluded from page 467.)

Or the ordinary modes of sowing and planting Peas for an early crop, it is needless to say much, as they have been frequently detailed to the readers of THE JOURNAL OF HORTICULTURE. In general, the middle of November is as early as is prudent, under any circumstances, to sow a crop, and very often this is too early, a mild autumn or winter encouraging growth till the plant is so far advanced as to be unable to withstand the spring frosts which follow, so that it is generally better only to sow a small quantity at that time, and make another sowing early in December, following this up by one early in January. This is the mode we adopt, but Mr. Fish, our worthy coadjutor, prefers deferring sowing till spring, and then he does so in pots or boxes, and plants the crop out after hardening off in the usual way. We have adopted both plans with much the same result, and where there is a difficulty in saving the autumn-sown crops from the attacks of slugs, mice, and other depredators, as well as when there is some drawback in the ground, it is better to rely on spring sowing and planting out; but when any approach to uniform success can be depended on out-door sowing is a much less troublesome mode, as the earliness of the crop in each way is so nearly alike, that it would be difficult to say which is the better.

The preservation of the seed from mice and birds, and the young plants from the attacks of slugs and smaller enemies, are also matters worthy of attention. Covering the row with coal ashes is not by any means a bad plan, but they ought not to be fresh from the fire, otherwise they are prejudicial to vegetation. A covering of sawdust is also beneficial, as mice do not seem to like burrowing in that material, while better than either as a preventive of the attacks of slugs, is barley chaff, which attaches itself to, and lacerates the soft bodies of the slugs, and does not seem to be at all relished by mice.

The attacks of birds, however, are not so easily prevented,

and netting has to be adopted in some places; the simplest and easiest protection is a length of galvanised wire netting about 18 inches wide, bent in the middle so as to present a continuous arched covering. In some gardens these and similar contrivances have to be put in requisition to secure a crop in summer, the birds being so troublesome, and they are equally so when the crop is fit to gather.

It is seldom that the early crop requires any further shelter than what the ashes, sawdust, or chaff alluded to supplies, but as soon as the plants have grown 6 inches high, or even before that time, some short stakes may be of service in protecting them from the effects of cold winds or late spring frosts. I have seen coverings for early Peas and Potatoes made like the ridge of a house, about 18 inches wide, and the same high, transparent calico, or some such material being stretched over them, and which could be put on and taken off when wanted, and they were of service to the Potatoes; but the Pea is a much hardier, though not by any means so robust a vegetable. In cold, bleak situations, however, shelter of some kind may be of service, and in such the crop may receive its proper staking earlier than in places more favoured.

Of the varieties of early Peas much has been said and much disputed. The multiplication of names has been such that it is much to be feared that several so-called early varieties, have a common origin in a bag of Charlton, the only difference being the name and the higher price. Now, I by no means charge respectable seedsmen with intentional fraud—on the contrary, many, I know, are amongst the most honourable traders of the community; but there are others less scrupulous, who, though their stock be but limited, yet, somehow, have always everything that is asked for, and a bland excuse for everything that comes different from what was expected; but buyers, as well as sellers, are to blame for this. The insatiable thirst after fresh names must be met, and scope is given to those whose scruples do not prevent their benefiting by it, and, though new and popular varieties of Peas, as well as other vegetables, may be decidedly better than some that preceded them, it unfortunately happens that every parcel bearing that name is not the true variety. However, a few years generally consign all indifferent varieties to oblivion—thus the popular names of ten years ago are but rarely met with now, while the standard old ones, as the Kent, Charlton, and Early May, which, by-the-by, I believe all very nearly resemble each other, are still on the lists. Nevertheless, as improvements are wanted, let us hope that further progress may yet be made. In the meantime I give a short list of such early varieties as I am acquainted with:—

Daniel O'Rourke.—A good Pea; stands the winter well, and a tolerably good bearer. Sangster's No. 1 is the same as this.

Warner's Emperor.—Of late years this Pea has become more tender with me than it used to be; it is, however, very good still, and, amongst early Peas, none is more prolific.

Dickson's Favourite.—Somewhat taller than the above, being more in the way of Prince Albert, and I believe Omar Pacha is somewhat the same in habit; with me it did very well last year.

Early Warwick.—This old variety has so strong a resemblance to the Charlton that I think they must be classed as synonymous.

Racehorse.—I have never seen this in good condition, and I find the name is rare in seed catalogues.

Early Frame.—This, the Early May, Kent, and some others, have doubtless taken their origin from the Charlton. They are all good bearers, and about the same in earliness as those previously mentioned.

I must confess that these are the only early kinds I have grown of late years, and many kinds are no doubt omitted which, by other growers, may be regarded as superior to any I have named. Amongst those I hear spoken well of is Sutton's Conqueror, very good as a running Pea; and there are some of the dwarf section, such as Dillistone's Early Prolific and Tom Thumb which have each their admirers. Doubtless there are others of equal merit, but, not having grown them, I cannot speak from my own experience. Early Peas, however, are of such importance that it is not likely that any really good ones can remain long unknown. The great aim seems to be to obtain varieties that will

come into use a few days sooner than those already known to us. Constitutional hardiness is another qualification; for it sometimes happens that considerable portions of a row die off in March, from causes which are but imperfectly understood. I have in vain endeavoured to determine the cause of this, though it is likely that the plant dies when it no longer receives any support from the seed; but I am far from affirming that such is the true cause, as the season is generally so far advanced as to lead to the belief that the seed had long ceased to afford nourishment. Certain, however, it is that everything connected with the Pea is not yet fully understood; and I confess being as anxious to learn more on this subject as to give advice. Common as the Pea is, and its culture under certain conditions more easy than that of most other crops, there are some points connected with its management in winter, as well as in the latter part of summer, which render it anything but a certain plant. On its summer growth another article will be forthcoming at an early period.—J. ROBSON.

ANEMONE APENNINA CULTURE.

IN reply to "E. F.," who complains of the flowers of her *Anemone apennina* plants being "poor and puny," I may state that we have plants of it in large patches in a border amongst other herbaceous plants that have no flowers less than a half-crown piece, and many fully the size of a crown piece. The border runs east and west. At the back (the south side) there is a row of variegated Hollies and other shrubs from 10 to 15 feet in height, in front of them are tall herbaceous plants gradually lowering in height from the back to the front, which may be about 8 feet from the Hollies and shrubs. The border is, therefore, fully exposed to the north, and partially so to the south; for the shrubs shade the border considerably, yet not completely, for they are not planted close together, but so that each may be seen, and worked about on all sides. In this border, about a foot from the Box-edging, the Blue Wood Anemone is planted now in patches a foot or 18 inches in diameter, with room between each for hoeing and otherwise trimming the border when necessary. In this border, shady during the mid-day hours only, in a light loamy soil on gravel, this plant is quite at home. It has no rival when in flower, and even before blooming its handsome foliage renders it particularly attractive. It receives no care beyond keeping clear of weeds, and the intrusion of its neighbours, and lightly pointing the ground around it in autumn or spring.

A calcareous soil is the most suitable for it; but it will grow anywhere if the soil is free of stagnant water, and not very strong. The situation should be open yet shady—that is, not so shaded as to be hidden from the sun's rays by a close canopy of leaves overhead, nor dried up through the trees abstracting all the moisture and nutritive principles from the soil, but what may be termed open woods and borders shaded from the mid-day sun, on the borders or margins of which it will grow freely, especially if the soil is naturally light and dry, and not rendered so by the roots of other plants. The ground should have a dressing of leaf mould 3 inches thick worked in to a depth of a foot, and the roots should be planted in this in August or September about 3 inches apart, and covered an inch deep with soil. In November the surface should be mulched with an inch of leaf mould; and here they should be allowed to remain for the next three years at least without being disturbed, keeping them clear of weeds and other plants that may intrude upon them. If the part of the garden is kept as dressed ground, a slight forking around them twice a-year will not injure them, providing care be taken not to disturb them, and if a little leaf mould be forked in each time the fork is plied round them the flowers will be much finer.

Once planted and established nothing further will be required for years, and the plants will go on increasing, in time forming large masses, which when in a sheet of bloom, as I have seen them amongst some trees surrounding rock-works not many miles from York, cannot fail to cause admiration. It is a scarce plant in gardens, and in the trade, but ere long we shall have such plants as these offered by the hundred, and in time our parks, our woods, and woodland walks will present a scene of interest and beauty that will

vie in spring with the more costly flower garden. The time will soon come when our parks, our woods, and our woodland walks will be ornamented with such plants as the Snowdrop and Aconite in winter; Crocuses peering on their margins, and on mounds; Daffodils decking the pastures and making them yellow, as if strewn with Buttercups; Primroses and Cowslips adding their charms. Crowfoot and Orchises will be in the hollows of many meadows, and most woods, as well as the common Wood Anemone, the Violet, and very many more, all in place of Nettles, Thistles, and other rubbish, for which such places are now so conspicuous. That the walks in woods will soon be made fit for the foot to tread upon once more, that employers will see that such places are not robbed for the sake of sensation gardens, and that there will be a return to things purely horticultural, is the firm conviction of—G. ABBEY.

BIRMINGHAM FRUIT AND CHRYSANTHEMUM SHOW:

OR, THE HANDSWORTH HORTICULTURAL SOCIETY.

FROM what has been written of this Society from time to time, we might have been led to believe that it offered fair for a Midland Counties Exhibition. Than Birmingham no town could be better chosen, and no time more wisely selected than the week of the Cattle and Dog Shows. It is worthy of remark that whilst a horticultural society seems to be maintained with difficulty, a Cattle or Dog Show whenever attempted meets with every success, and the rush of visitors is something extraordinary. We have been so long used to a cattle show, that we do not now wonder at the fittings and preparations for these occasions. A dog show is of more recent introduction, and who could visit this show at Birmingham without feelings of admiration? A building to all appearance erected for the express purpose, beautifully fitted up and subdivided for the accommodation of the different classes of animals, and even abundantly heated by the introduction of gas—a multiplicity of dogs in every class, clean, and well cared for—at one end of the building a magnificent display of silver cups for distribution amongst the successful competitors—all this showed strength and a healthily-conducted exhibition.

We do not find in the Cattle and Dog Shows such restrictions as to the locality of the subjects for exhibition as we do in the Horticultural Show. The two former are most liberal, and have acquired a fame worthy of the great town in which they are held; the latter is remarkable for its being so extremely two-sided. The Class No. 1 limits the competition of fruit to that which is grown within fifteen miles of Birmingham; and Class No. 2 is open to all the world. Thus an English gardener who wishes honestly to compete for any of these prizes, pits himself against others who get up their collection out of a garden in size nothing less than that of the whole world. I am inclined to think that before this Society can claim to itself much credit for being the cause of advancing the "science of horticulture more than any other provincial one" (as stated by one of your contemporaries), an infusion of much new blood will be required. I had a schedule sent me which I took for granted was an invitation to compete, but on looking it over I found that in Class No. 1, I was precluded from the simple fact that I was beyond the restricted radius of fifteen miles. On reference to Richmond's new map of the Midland Counties, I am about twenty miles from Birmingham, as the crow flies. Referring further to this class, there were no prizes for Pine Apples, or single dishes of Grapes, which at this season of the year are very interesting. Then, again, for a collection of twelve dishes of fruit, a prize of 30s. is offered. This is the highest prize in this class. A goodly sum for such a boastful Society. This Exhibition, be it remembered, is open for four consecutive days during the great show week, and is afforded the use of the "noble Town Hall granted by the Mayor," yet the total amount of prize money, including the ten-guinea cup, does not amount to £100. How does this small amount contrast with the reported account that "several thousands visited the Exhibition during the four days?" This is the amount which does so much for the "science of horticulture." It seems strange that a medium cannot be given between on the one hand, a radius of fifteen

miles round Birmingham, and on the other the ends of the earth! The true gardening skill of this country is not encouraged or represented by the Handsworth Exhibition. We do not find such restrictions and extremes in the Cattle or Dog Exhibitions.

I next had a glance at Class No. 2, open to all the world fruiterers, dealers, and others. The bye-laws of this class say—"It is not imperative that the fruit shown in this class should have been grown by the exhibitor." This piece of cooked jobbery would not do for me—pardon me for thus expressing myself, but to me it seems too plain, and I cannot help it. If I were to compete in this class, having a view to success, I would have to journey or telegram, to beat up a collection. Thus, without even the shadow of a garden, without even seeing a single fruit necessary for any of these collections for fifty consecutive weeks prior to the Show, may any one with a very ordinary amount of sagacity, purchase or obtain by any similar means, all that is required, and he who is most assiduous by these means in obtaining the ten-guinea cup, will, according to this Society, be the one who has contributed most to the advancement of the "science of horticulture," without requiring to take any pains as to culture, watering, budding, grafting, root-pruning, and a thousand other cares. A man following any occupation in kin as different to gardening as a lobster is to a skylark, may, by means of "purchase, put himself in a superior rank to those who have laboured indefatigably in the trenches for twelve months."

Societies are generally organised through the exertions of some enterprising individual, and generally prosper when they have for their object the common weal of his country and fellow men, and with such philanthropic views that individual is much to be admired. I do not profess to know who are the actual managers of the Handsworth Society, but from a report which has appeared in this Journal, for its admirable arrangements much credit is due to the Honorary Secretaries, Mr. George P. Tye, and Mr. Charles James Perry, the latter maintaining throughout the play a position resembling very much that of a "Hamlet." It is indispensable to have a good Secretary for the management of a Society, and few positions could offer better to show the philanthropy of a man than that of an honorary secretary giving his services in such a way as not to invite the remark that those services are for any selfish end. At this Show we find the Honorary Secretary, a resident near Birmingham, competing for, and carrying off the ten-guinea cup, and all the rest of the principal prizes, obtaining twelve first prizes and four second, walking easily over every one, including Mr. Pluck, a fruit merchant of Jersey, a resident among the fruits in the Channel Islands, and to whose name we only find one first and two second prizes recorded. It seems strange that Mr. Pluck should send fruit all the way from Jersey, and compete only for one or two secondary prizes. The large collection of fruit of Mr. Perry's which did obtain the cup, contained a tolerably free sprinkling of baking and stewing Pears. Mention of this, however, did not appear in any of the reports of the meeting which I saw.

It will be necessary for the Handsworth Horticultural Society, professing to do so much for the "science of horticulture," to give a public explanation as to the cause why they limit their encouragement to fifteen miles round Birmingham on the one hand, and on the other why they invite competition from all parts of the world. These extremes without some explanation are not reconcilable, and until this is done, the Birmingham Fruit Show will remain a delusion.

A thoroughly healthy horticultural society is much wanted in Birmingham, not only for the Midland Counties, but for the north of England, Scotland, and Ireland. Many gardeners at this season could bring their productions to Birmingham, who could not go so far as London, and on this account their produce, no matter however meritorious, would never be brought before the public. There is yet a wide field open for the encouragement of horticulture. The Royal Horticultural Society of London enjoys a great name, but is exceedingly local in its efforts to do good. Those who reap the most benefits from that Society are the London nurserymen, and suburban gardeners, whilst the encouragement of provincial nurserymen and country gardeners is comparatively neglected. But now that they are fairly

started (?) we find them desirous of having union with local societies, and what is to prevent them from putting their shoulder to the Birmingham Society, and issuing a schedule for a great fruit show to be holden once a-year during the show week? It might, however, be necessary to depute from the Fruit Committee a certain number of delegates to insure success and protection to the meeting.—Wm. MILLER.

CHARLES LEFEBVRE ROSE.

AMONGST its other claims to be considered the finest Hybrid Perpetual Rose in cultivation, may be added, if my experience of it be correct, that of really deserving the name of Perpetual. I have this day (December 8th), cut a bloom of it, which for size, shape, and colour is as perfect as if cut in the middle of the Rose season. It measured 5½ inches across, and is, as I look at it on my chimneypiece, a rich treat at this time of the year. Undoubtedly this is an exceptional season, but I think there are few Roses of which such an account can be given now. You may get them, it is true, but not in such character.

I know it is the habit to decry Perpetual Roses, as if they did nothing worthy of their name, but to have had, as I have had, blooms for so many months, up to midwinter, surely entitles them to some credit on this score. If persons expect that their trees are to be for ever crowded with bloom as in summer, of course they will be disappointed; but if their expectations are moderate, I do not at all see that the name is undeserved, and it is just possible that improved varieties, with somewhat more of Bourbon blood in them, may yet give us more autumn flowers than even at present.—D., Deal.

DESTRUCTION OF RED SPIDER.

SOOT is a certain cure for red spider. No plant, that I know of, is more subject to them than Kitley's Goliath, a much better Strawberry than has ever been allowed. I have re-introduced it. It is better than many that come out at high prices. It is obtuse-coned, subject to white tips, but fine, a heavy cropper, and of good flavour. Red spider drove it out of general cultivation. Some years ago I had some plants sent to me to plant covered with them like Cayenne pepper, I put in the plants, watered them and the whole surface of the ground, and then I put on the soot till nothing but soot could be seen. I never saw anything more of the red spider. My present Goliaths are perfectly free from this pest. In two places I have seen Goliath perfectly devoured by it. Perhaps soot mixed with the sulphur and clay might be of service to the fruit trees of "G. W." (page 472). Insects detest ammonia, and in no form can you apply it so innocently as with soot, which containing nitrogen is conducive to the prosperity of vegetation. When sown over Strawberry plants it enables them greatly to resist severe frosts.—W. F. RADCLIFFE, Rushton.

CRUSHED BONES AS A MANURE.

I SHOULD feel obliged by any of your correspondents stating if any injury has arisen to their plants by the use of crushed bones. Mr. Rivers, in his "Orchard-House," recommends the use of one quart of bones to every potted Vine, mixed intimately with the soil; and, in your answers to correspondents, I see them recommended to be placed near the bottom of the pot. Now, I had some nice young Vines last autumn, two years from the eye, intended to fruit the present season, which were healthy and well-rooted when potted, and to which I applied about one quart of fresh bones, crushed, mixed with the soil, and I expected good results. From about ten such Vines I have not had a bunch; they have grown very badly, and have not ripened their wood. Satisfied that something was radically wrong, I examined their roots, and found them very poor and rotten, and some roots, as thick as the stem of a pipe, which look healthy, are in some places shrunk to half their size, and at such places they easily break.

My sister, also, hearing of the virtues of bones, used some for her Fuchsias, which have done pretty well; but, on repotting, she finds very few roots, whilst, in other seasons,

without bones, the soil has been one complete mass of roots.

My opinion is that the bones have generated some fungus or other in the soil, which has produced the effect described. Favour me with your opinion, and say should the bones be raw or boiled, or vitriolised.—J. J.

[A quart of crushed bones we consider quite enough for a bushel pot. Using raw bones extensively has just produced the same effect as using putrifying flesh in the soil. Boiled bones, or old bones, may be used more freely. Vitriolised bones, as superphosphate of lime, may be used safely in moderation, and best as a top-dressing—say 2 ozs. at a time to a 15-inch pot. We, too, have been thwarted once or twice by using raw fresh bones. If unavoidably used they should be placed in the soil at some distance from the roots.]

VINES IN AN ORCHARD-HOUSE.

I SEE one of your correspondents does not agree with me on the value of the Trentham Black Grape for a cold house, and says his plant does not set its fruit well. I have two bearing-canvases of this variety, one in a warm house and one in an orchard-house without fire heat. From the first we gathered about 40 lbs. weight of beautiful fruit, as well set as Black Hamburgs, larger, richer, and thinner skinned, and it has been quite as satisfactory in the two previous seasons. I know it to be correct, having had the plant direct from Trentham. As I wrote before, it was in every respect superior to Black Hamburg in the cold house.

Now, as both of our houses have a good deal of air given to them, is it not possible that your correspondent's house may have been too close and damp? There must be some reason if we could but find it out why Vines behave so differently in one place to what they do in another. Ask a man whose soil is dry and who gives a great deal of heat to his Vines, what he thinks of Barbarossa, and he will, perhaps, tell you it is the best of all late Black Grapes. We all know what it is as generally seen. So of the true Black Alicante. I have grown it for years in two houses, one warmer than the other. In the warmer house it is equal to the Lady Downes' and keeps better; in the other, which had heat enough to ripen Black Hamburgs thoroughly in October, it is hardly fit to eat, though quite black and equal in appearance to those in the warm house. There is much to learn about fruit; let each give his opinion and the reasons for it, and it will be mutually beneficial.—J. R. PEARSON, Chitwell.

CHRYSANTHEMUM "BOB."

TWO gardeners here in New York had a dispute about the date when Chrysanthemum "Bob" was first introduced, raised, or sold in England. The one contends that it was cultivated in England in 1850, the other says it was not out at that time. Will you oblige us by answering the above.—J. W. WOOD.

[We sent the above letter to the best authority we know on all that relates to the Chrysanthemum, and the following is his reply:—"Bob was raised by an English florist at Lyons, named Smyth, about 1852. I sent it out in 1854.—JOHN SALTER, Versailles Nursery."]

CHILDREN'S CHRYSANTHEMUM SHOW.—A Chrysanthemum Show on a small scale, took place at the school-room of Summer Town, near Oxford, on Monday last, the exhibitors being the children educated there. With the view of fostering a love for flowers amongst the children, one hundred young plants were distributed in the spring to about thirty of them, boys and girls, by a late resident (Professor J. O. Westwood), the only restriction being that the children undertook to cultivate the plants themselves without assistance. Small prizes were offered, not so much for fine flowers as for care bestowed on the plants. The late dry summer proved unfavourable for the experiment, but seventeen of the children produced their plants on Monday last, to nine of whom prizes were accordingly given; several of the plants being carefully trained and nicely bloomed. The girls appeared to have bestowed as much pains on their plants as the boys.—(Oxford Journal.)

CULTIVATION OF THE MELON.

(Continued from page 413.)

MELONS IN HOUSES.

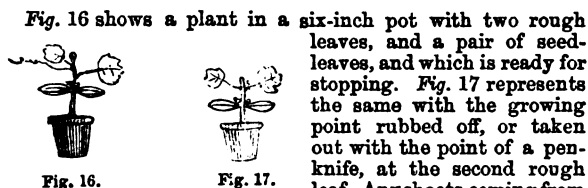


Fig. 16.

Fig. 17.

the axils of the seed-leaves are to be rubbed off when first visible.

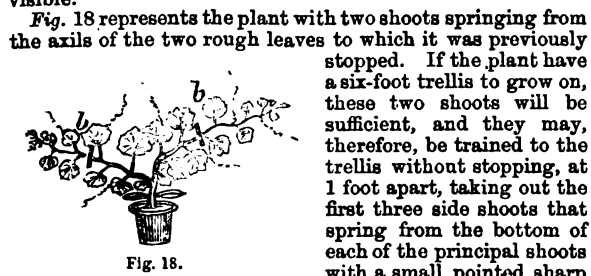


Fig. 18.

Fig. 18 represents the plant with two shoots springing from the axils of the two rough leaves to which it was previously stopped. If the plant have a six-foot trellis to grow on, these two shoots will be sufficient, and they may, therefore, be trained to the trellis without stopping, at 1 foot apart, taking out the first three side shoots that spring from the bottom of each of the principal shoots with a small pointed sharp

knife. Thus taking away the side shoots near the collar of the plant secures light and air at that part, and decay there, which is a common disease, is to a certain extent prevented. If three or four shoots be required to cover the trellis, at the distance of a foot apart, the two shoots are stopped at the third leaf (b, fig. 18), and this will give rise, generally, to six shoots, but always to four; and of these, four shoots should be trained up, at 1 foot apart, from the bottom towards the top of the trellis, and if two more be produced, they also may be retained, and kept at the lower part of the trellis, and stopped pretty closely, to act as a reserve in case the principal shoots fail to produce fruit.

The requisite number of shoots to cover the trellis being obtained, whether that number be one, two, three, four, or more, they should be trained straight without any further stopping until they reach to within 6 inches of the top of the trellis, when the point of each should be taken out with a penknife, for large cuts at any time always weaken the plant. Taking out the points of the principal shoots will cause the emission of side shoots, which I will term laterals, all along the principal shoots, and from these, at the axils of the second or third leaves, fruit will usually appear. Should any, however, not show fruit at or before the third leaf on the lateral, such should be stopped at the third leaf, but those showing fruit should not be stopped until the embryo fruit has been duly fertilised, and the corolla has closed over the impregnated organs; all the laterals should then be stopped at one joint above the fruit, the plant will then have the appearance shown in fig. 19, presuming it to have been trained with four shoots; and let the number be what it may, each principal shoot will resemble those in the figure.



Fig. 19.

From two to four fruit being set on each plant, their swelling will be materially aided by stopping at the first joint all growths from laterals not producing fruit, but those sub-laterals taking their rise from the axils of the leaves situated on the laterals producing fruit should not be stopped until a week or ten days afterwards, so that the food arrested by stopping the sub-laterals may not only be driven, but attracted past or into the fruit, the growing

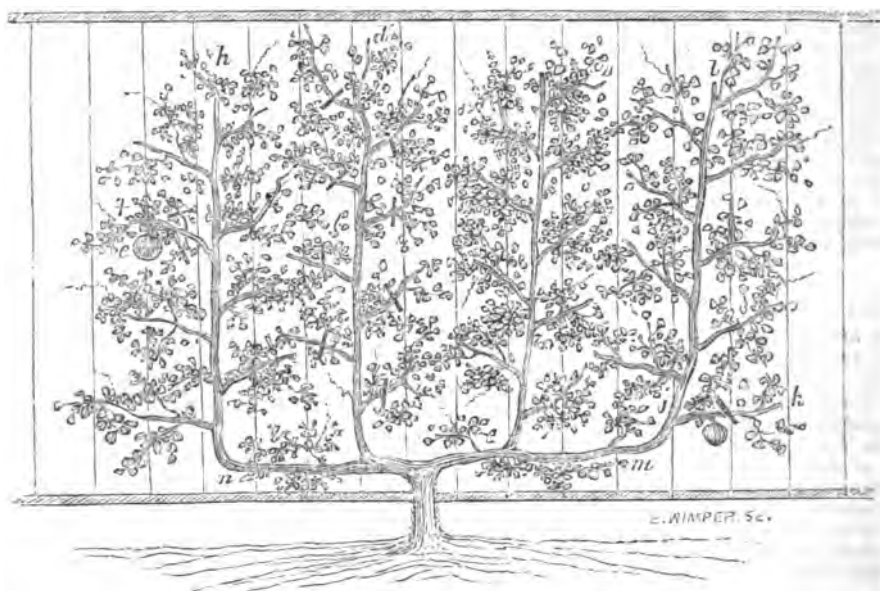


Fig. 20.

point being situated above or near it. This being effected the fruit will swell rapidly, and by stopping the sub-laterals on the lateral on which the fruit is borne beyond the point at which this takes its origin, and the whole of the other sub-laterals on the plant being kept closely pinched in to one joint as fast as new growths are made, the whole strength of the plant will be concentrated on the fruit,

which will rapidly advance towards perfection. Continue to keep the sub-laterals closely stopped, giving those, however, on which the fruit is borne rather more freedom. Should the frequent stopping tend to overcrowd the main leaves from the principal and lateral shoots, the sub-laterals must be reduced in number by cutting them clean out, and close to the shoot or lateral from which they spring, so as to

expose the principal shoot and lateral leaves to light and air, in order that the food absorbed by the roots may be duly elaborated in the leaves, and these being kept healthy fine, full-flavoured fruit are the consequence.

It is quite possible that the embryo fruit produced on the laterals may not set or swell, or it may be that none is shown. In this case the laterals should be stopped at the third or fourth leaf, and this stopping will induce sub-laterals on which we may confidently look for fruit at the first, second, or third leaf. This being the case the sub-laterals are stopped at the third leaf; the plant will then appear as represented in *fig. 20*. The fruit being set and swelling freely, it is necessary to thin the sub-laterals, going over them twice—first, a week or ten days after the fruit begins to swell, removing two of those not producing fruit, but not stopping any shoots whatever, only removing two of the sub-laterals on the laterals from the upper part, as shown by the cuts on the principal shoot, *d*, and this from every part of the plant, unless such be producing fruit as, *e*, on the lateral, *f*, and principal shoot, *h*, on the left, when the two sub-laterals below that on which the fruit is borne are stopped to one leaf each, thus *l*, and the shoots from the sub-lateral are not stopped but left to grow for some time. In case the fruit is borne on the nearest sub-lateral, *i*, on the lateral, *k*, on the principal stem, *l*, the sub-laterals and lateral are removed to the cross cut on the lateral, *k*; but those shoots springing from the bases of the sub-laterals are not stopped at that time, nor until a week afterwards. From a week to ten days after the useless sub-laterals are cut away, the growths taking their rise from the sub-laterals are stopped to two leaves, but if producing fruit to four, above the fruit, and if those left overcrowd the main leaves and stems, their number is reduced by degrees, so that the plant may not be gorged with sap, and gout result through an insufficiency of leaves to elaborate the food absorbed. After this the new growths are kept closely stopped, and thinned to admit light and air to the main leaves until the fruit is perfected, when the plants may be pulled up, and others planted in fresh soil if a second crop be desired; for Melon plants in houses after producing one crop are not worth keeping to afford a second.

In case the principal shoots do not set fruit on the lateral, or sub-lateral shoots, the principal shoots may be cut down to the two reserve shoots (which have been kept pinched in) at the base of the plant, and situated to the right and left respectively—viz., *m* *n*, in *fig. 20*, and shoots sufficient to cover the trellis may be obtained if the plant is vigorous enough and they must be trained in lieu of those cut away. Such shoots cannot fail to produce fruit immediately, but it will be small, though well flavoured. This method of training Melons is adapted for all low trellises, and is the same as that recommended in the case of training the Melon over the surface of beds without trellises.—G. ABBEY.

(To be continued.)

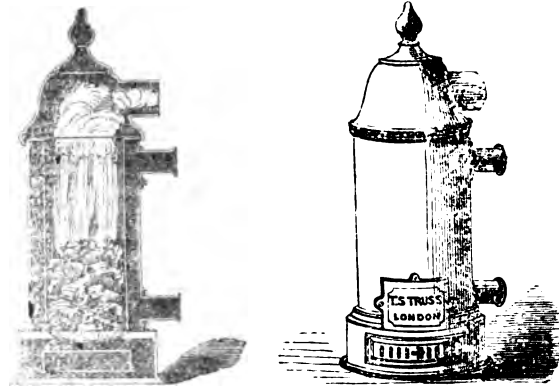
BOILERS WITHOUT BRICKWORK.

I NOTICE in the Number of your Journal published December 6th, that you say, in answer to "A CONSTANT SUBSCRIBER," on the subject of stove boilers—"We have reason to know that the boiler named soon burns through, and that all the so-called boilers without setting do the same. There is little if any difference in them, and they all do their work pretty well, subject to the drawback of the outer casing speedily burning through."

In reply I beg to state that by no means "all" the stove boilers burn through, as I can mention four or five manufacturers in London besides myself, who make stove boilers requiring no setting, and which do not burn through any faster than the ordinary saddle or conical boilers set in brickwork. These boilers are constructed with the fire in the interior of a cylindrical water space (see accompanying engraving), and no casing is used outside.

I may mention that I have erected this class of boiler in the Royal Horticultural Society's Gardens at Chiswick and South Kensington, and in many other places, especially in the neighbourhood of London, where I find they give great

satisfaction, as they are quickly and cheaply erected, and can be as easily removed if required for alterations.



I think you will see from the enclosed tracings that the boilers which I have described differ considerably from the one to which you allude in your remarks.—THOS. S. TRUSS.

[We quite assent to the above. Our observation applied to furnaces with boilers placed above them, not to furnaces the sides of which are formed by the boiler, for as long as this is kept filled with water no excessive burning can occur.]

WORK FOR THE WEEK.

KITCHEN GARDEN.

No opportunity should be allowed to pass by, of getting the soil in a favourable state for the reception of the various crops which must soon be committed to it, and as the basis of success is allowed by all good practical gardeners to be a thorough system of drainage, no time should be lost in attending to this most material point. Whatever is done should be done well. Never allow a drain to be laid down that is likely to be deranged in its operation, as the good that may otherwise be derived from it would be nullified from the difficulty of ascertaining where the defects are. As this kind of work may be done any time when it is dry overhead, you will do well to look to it in time. *Broccoli*, these will be advanced by the recent mild weather, look over and select the most forward for protection in case of the return of frosty weather. Continue to remove all dead and decaying leaves. *Cabbage*, plants may still be planted or pricked out from seed-beds, and those planted in October should have a little soil drawn to them. *Garlic* and *Shallots* should be planted. *Peas*, the early ones which are breaking the soil may have a ridge of mould drawn over them, a covering of sawdust, old tan, or clean sand, is very good for the purpose, as it tends to keep the slugs in check. Set traps regularly for mice. Provide a successional supply of *Sea-kale* and *Asparagus*, in whatever way forcing is practised.

FRUIT GARDEN.

Orchard trees of large size are much neglected about many places as to pruning, the heads should be liberally thinned, cutting out all branches which cross the others, and dead pieces, and leaving the shoots sufficiently far apart that light and air may have free play among those left when the foliage is on. In removing large branches care should be used to make close clean cuts, and if the wood is coated with strong, thick paint, this will help to prevent its decaying before the wound is healed over. Also, take advantage of leisure time to thoroughly examine the fruit stores, and remove any that are found to be decaying. Of course, the frost must be excluded from here, but on no account use fire heat unless the temperature cannot otherwise be kept above freezing. Admit a little air on fine days, especially after keeping the room shut up for some time; but as the fruit will now give off but little moisture, very little air will suffice to keep the atmosphere dry, and no more than may be necessary to do this should be given. Any of the more choice varieties of *Pears* that do not ripen properly should be removed to a warm, dry room for a few days, which will be found to greatly improve them.

FLOWER GARDEN.

Laurustinus, variegated *Hollies*, or other such shrubs that have not grown kindly to be supplied with a top-dressing of rotten dung or leaf mould, to be lightly forked into the ground to give nourishment to the roots. If a similar want of luxuriance is perceptible in *Rhododendrons*, or other such evergreen American shrubs, they may be taken up and replanted with advantage, enriching the ground with a liberal supply of peat soil, or well decomposed leaf mould. Hoeing and raking the borders amongst shrubs will be sufficient to give them a clean and neat appearance, without the spade, to which we have a great objection when used to cut up the fibrous roots to debilitate the growth of shrubs that were planted to produce luxuriant and healthy growth as the most ornamental for pleasure-ground scenery.

GREENHOUSE AND CONSERVATORY.

As a moist stagnant air is most injurious to greenhouse plants at this dull season, we would advise a gentle fire to be applied during the day to expel damp; but heat and moisture should be reduced to the lowest degree possible compatible with the safety of the plants from frosts, and in accordance with the very small amount of light at this season. When high degrees of heat are kept up a large amount of water is necessarily applied, when elongation, or length without strength, takes place. Orange trees, or any other plants that have not been recently potted, to be fresh-surfaced by removing a little of the top soil and supplying its place with fresh. *Pelargoniums* to be kept rather cool and dry, giving whatever water they may require on the mornings of fine days, that the superfluous moisture may evaporate before evening. Herbaceous *Calceolarias* to be kept near the glass, shifted into larger pots if they require it, to be watered moderately through a fine rose, to be never allowed to get thoroughly dry, and when they require water it should be given before noon. The attacks of green fly to be prevented by fumigation with tobacco smoke; and when removing decayed leaves be careful not to pull or cut them off close to the stem, when the flower-shoots would be very likely to be injured by the operation. *Camellias* after the buds are set, and so far advanced as they are at this time of the year, require particular attention that they may not be excited too much by artificial means, nor must the temperature be allowed to decrease for fear of the flower-buds falling off. Water also should be carefully given, neither saturating the soil to stagnation, nor allowing it to become too dry. When the *Chrysanthemums* begin to fade they may be removed to the north side of a wall, the pots plunged in old tan, leaves, or sawdust to protect them from the severity of the winter. Constant removals in the conservatory will at this period be necessary, for where a good reserve stock is kept, nothing should be suffered to remain which does not contribute to the gaiety of this structure. This change renders the whole more interesting; for in former days, before the special cultivation of winter flowers was understood, a most tiresome monotony prevailed: the *Oranges*, *Myrtles*, *Oleanders*, with huge American *Aloes*, appeared as if nailed to the spot. Take all possible means to avoid drip, and maintain the most perfect cleanliness and order.

PITS AND FRAMES.

Continue to give careful attention to half-hardy plants in these structures, taking advantage of every favourable opportunity to expose them freely to air. Anything of which there is but a small supply of plants to propagate from should be placed in growing-quarters at once, taking care to keep near the glass, and free from insects, mildew, &c. Softwooded plants in heat at this season are very subject to the attacks of insects.—W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

MUCH the same as last week. Gave plenty of air to *Asparagus*, encouraged *Rhubarb* and *Sea-kale*, and planted *Potatoes* in pots, to be grown in them, and others in small pots to be transplanted when we get a slight hotbed. Sowed also some dwarf *Tom Thumb Peas* in pots, and put some charred rubbish and burnt weeds by the sides of the young *Cabbage* plants, and also top-dressed with the same *Cauli-*

flowers under hand-lights, so that the surface soil may be as dry as possible. Will try and keep rain from them for three months. Gave manure water to Dwarf *Kidney Beans*. Thinned the *Cucumber* fruit in a small bed to enable it to keep on a little longer, and made a small hotbed for sowing the first crop under a frame. When the shortest day is passed everything will grow better and faster afterwards.

FRUIT GARDEN.

Proceeded with pruning and nailing as opportunity offered, as the spring will be sure to bring its own work with it. As soon as convenient we will daub our dwarf trees with a mixture of Gishurst, soot, lime, sulphur, clay, cowdung, &c., to clean the stems, and keep the tomtits and bullfinches from the buds. Just now the tomtit does, we think, more good than harm, as he casts his sharp eye and little bill so knowingly into every hole and cranny in search of insects. In general he acts as a friend until the buds begin to swell, and then he will do his work in earnest, clearing a tree of its fruit-buds in a very short time. Last season, independently of netting, he made great havoc with *Plums* and *Pears*, and just began on *Apples*, when we managed to lose sight of him. He requires to be sharply looked after, for after and during hard weather you may not see him for a month or two; but most likely when the buds are soft and sweet he will bring not only himself but a whole cloud of relations, and they clear off everything as they go, pretty much like an invasion of locusts. Even now he may be easily poisoned by putting nux vomica or arsenic into pieces of mutton suet, but then, if we could only keep him moderate in his desires at bud-swelling time, we should feel sorry to interfere with the good deeds of the artful, little, pretty rogue at other times.

Gooseberry and Currants.—We generally merely thin a little, and defer full pruning until the bird-ravaging time is pretty well over. If we do not do it ourselves we hope that some of our readers will try these homely fruits trained to low trellises. It will be something strange if wasps do not touch them on these trellises. Amateurs who wish to have the fruit clean and nice, and to gather it themselves, without any danger of being troubled with lumbago, if they do not adopt the trellis plan, should have some standards at least 3 or 4 feet in height. A *Currant* tree is then a pretty sight in fruit, and so is a *Gooseberry* tree. The best way to secure them at first, is to insert a stoutish stick before planting, the stick rather higher than the top of the tree. Two cross wires fastened near the top of the stick, and a wire round at the circumference, would secure the tree well at first, and in a short time it would need no support.

Planting fruit trees may still be proceeded with. In many orchards the trees become covered with moss and lichens, and prematurely decay, from too deep planting. Nature herself will give an admirable lesson here. Every tree if self-sown, and with plenty of room to grow, will, less or more, be found to stand on a little mound, and the roots will be found extending near the surface of the ground, as well as at greater depths. With trees hardy enough for the climate, and which we wish merely to grow for timber, it matters little how deep the roots grow. In fine, mellow, loamy soil, there is no great necessity for planting even a fruit tree on a mound, though every reason for not planting it deep. All tender trees, and all fruit trees should be shallow-planted. In the case of tender trees, the less the growth the more fully will the growth be ripened, and, therefore, the better will it stand rough vicissitudes. This holds not only true in the case of fruit trees, but as we also grow them for fruit, and not wood, we should bear in mind, that the nearer the roots are to the air, and sun heat and light, the more will the fruitful parts preponderate over the mere growth developments.

Bush and Pyramidal Trees in gardens, therefore, will in general thrive none the worse for being elevated on little mounds. In thin sandy soil a greater depth is thus secured, and the roots run beyond the mound at a shorter distance beneath the surface. In very rich soils, with or without a heap of stones or clinkers beneath, the mound will help to check over-vigorous growth. In deep, cold, clay soils—at least with clay bottoms—the tree has a better chance to send its roots in the best soil, without being enticed to go deep, and be gorged with unhealthy matter fruitful of canker

and other evils. If the roots, by concreting or other means, can be prevented going down at all into such cold damp soils, the better will the trees flourish. The mounds also give a better chance for root-pruning if that should be necessary, and richness and moisture near the surface may easily be secured by top-dressing and mulching. In soil at all moderately rich, we would mix no manure whatever with it at planting time, but we would top-dress with leaf mould or rotten dung every year as long as the plant required it. Even if it became too strong and vigorous we would prefer root-pruning or replanting rather than discontinuing this surface-dressing, as the masses of mop or wig-like roots near home are more serviceable for producing and feeding plenty of fruit than lots of long naked roots going ever so deep. In planting on mounds, supposing the mound to be 4 or 5 feet in diameter, the centre may well be from 12 to 15 or more inches higher than the surrounding level.

Strawberries.—Nearly finished cleaning beds in the open air; removing all runners, thinning where too thick, but leaving the old leaves on the plants to act as some protection; then hoed or forked an inch or two in depth between the rows, and placed on the space a layer of rough, rotten, hotbed manure. Watered plants in pots under protection in orchard-house, as when now allowed to become too dry the flower-bud is apt to perish. This is more necessary in our case, as, owing to the drought of summer and little water to give them, our plants are in smaller pots than usual. Moved a lot of plants from a frame, where some were showing the buds, into a small pit where we have some Vines, and which we will start slowly. We will keep the pit rather close a few days, that the plants may sustain no check in being removed from the damp frame at this season, they having had a mild bottom heat from tree leaves. Nothing is better than such a frame for starting such plants; but anything like a check afterwards, either from a dry heat or a lower temperature, does harm to the Strawberry plants. We have placed them thick in the brick pit, as by the time they want more room we will be better prepared for thinning them. They are placed on narrow boards, with just a sprinkling of leaf mould on them, and that we like better than pans or flats at this season. We put a little hay and litter over the pots of trees in orchard-house, in case we should have a sudden frost; the wind from the north-east is cold enough for anything. Will prune and wash here at the first opportunity.

Forcing Vines, Peaches, and Figs may now be commenced, to have ripe fruit in June, beginning very slowly at first with a moist atmosphere, and a temperature ranging from 45° to 50°, raising it a few degrees each week until you approach 60°, above which the temperature should not rise by fire heat until the buds of Vines are all broken, the flower-buds of Peaches set, and the young Figs swelling. Where a little bottom heat can be given to early Vines it will be an advantage. Where the roots are out of doors the ground should be well, or, rather, early protected, to keep in the summer's heat. It will always be advisable to have a little heat in the border before raising the temperature much above that which is necessary to keep out frost in-doors. The mere excluding of frost by keeping plants under the shelter of forcing-houses does them no harm. But if such trees as Vines and Peaches have a little frost, but not enough to injure them, we think it helps to keep them more free from insects. On the other hand, it is right to state that we have seen Peach trees out of doors, exposed to a frost that was quite as much as they could stand uninjured, and yet be eaten up with insects early next season; whilst a few feet from them trees protected by glass, and frost just excluded, had not an insect on them the following season. All general rules have their exceptions. A few Figs out of doors we will give a little protection to before the frost becomes severe; but after having them in-doors in plenty, they have become of less use to us.

ORNAMENTAL DEPARTMENT.

Our chief work has been collecting leaves and thoroughly cleaning, and sweeping and rolling the pleasure grounds. The leaves have come down so irregularly that this has been a long, trying job this season, and nothing in a fine day, even to say nothing of a dull, foggy one, so much tends to conjure up morbid and melancholy feelings, as lots of leaves on walks and lawns, undergoing the first processes

of skeletonising. Our walks are so smooth that we are a little in doubt as to rolling them after this last sweeping. If we do so our chief object will be to make them firmer, so as to throw off the rains. A very smooth walk is not such a luxury in winter as it is in summer; and in fine weather in summer, walks, except in show places, however nice, are scarcely ever used. Who would tramp on gravel when he could use the carpet lawn? Where much walking is necessary in winter, the lawn will generally be too damp, and except for the thin goloshes of ladies, a roughish walk that will leave nothing on the soles of the boots, will be quite as pleasant as a smooth walk, if it leaves marks of the foot-steps. It is not easy to obtain both advantages. For smoothness we use a slight sprinkling of fine siftings every year. For roughness in winter all the large stones, and all the fine sandy siftings should alike be excluded. But for the first expense, walks in small places would be cheapest in the end, if formed of stone or pavement, or even of thick asphalt, but then they, too, would be too smooth, and sometimes dangerous in winter.

Worm Heaps on Lawns.—These are great eyesores, when a bright level expanse of green is the great object aimed at. In small plots the best and most effectual remedy is to roll the lawn, and then in a day or two when the holes are open to water it over well with clear lime water that is made by placing a good spadeful—say half a peck or more of quicklime in a hogshead of water, stirring it well and using it when clear. This will also banish them from the sides of walks. Salt would be more effectual for the latter purpose, but then it would also soften the walk. In large lawns it is almost impossible to use lime water all over, but a few places may be done near the mansion. The remedy for large lawns, however, must chiefly be the roller. A wooden one such as a boy can draw is best, and as the worm heaps encrust it, the earth must be scraped from it. A large space of lawn may thus be gone over quickly. A handy wooden roller may be 10 or 12 inches in diameter, and 3½ to 4 feet in length, furnished with a light wooden handle to pull by. Such a roller is as useful for a lawn in winter, as a daisy-knife is in summer. Sweeping worm heaps, unless in very dry weather, is an unsatisfactory process. The roller leaves a better appearance behind it with a tithe of the labour. Besides, the worm dislikes the sound of the roller, and departs to his deeper fastnesses for protection.

Besides attending to plants in general, we have put Roses, Dielytras, Deutzias, and other shrubs in frames and beds where they can have a mild bottom heat, preparatory to more forcing. Planting of all kinds may be proceeded with, and if tender Roses have not been taken up they should be protected with fern, spruce branches, &c. Many things, as Fuchsias, should have their roots protected with moss, ashes, or sawdust; and Hollyhocks will be the better of having mounds of such and charred rubbish placed over the roots; Dahlias we keep in dry earth in a shed, like Potatoes, and have rarely lost a root.—E. F.

COVENT GARDEN MARKET.—DECEMBER 17.

The market continues well supplied, out-door fruit and vegetables being plentiful, while of Grapes and Pines there is sufficient for the demand. Quinces are becoming scarce, and will soon be over. In forced vegetables good Sea-kale and Kidney Beans may now be had, but Rhubarb has not as yet made its appearance. In Potatoes prices are fully maintained. Christmas trees are now brought in large quantities, and the greengrocers are laying in their stock of Holly and Mistletoe. The showy scarlet-bracted Poinsettia pulcherrima is also plentiful. Other flowers chiefly consist of Hoths, Camellias, Azaleas, Chrysanthemums, Chinese Primroses, Mignonetta, with a sprinkling of Perpetual Roses.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples.....½ sieve	1	0	2	0	Melons.....each	1	6	4	0
Apricots.....doz.	0	0	0	0	Malberries....punnet	0	0	0	0
Cherries.....lb.	0	0	0	0	Nectarines.....doz.	0	0	0	0
Chestnuts.....bush.	14	0	20	0	Oranges.....100	5	0	10	0
Currants, Red...½ sieve	0	0	0	0	Peaches.....doz.	0	0	0	0
Black.....do.	0	0	0	0	Pears (kitchen)...bush.	5	0	10	0
Figs.....doz.	0	0	0	0	doz. dessert	1	0	2	0
Filberts.....100 lbs.	40	0	60	0	Pine Apples.....lb.	5	0	5	0
Cobs.....do.	70	0	80	0	Plums.....½ sieve	0	0	0	0
Gooseberries...½ sieve	0	0	0	0	Pomegranates.....each	0	6	1	0
Grapes, Hamburgs lb.	2	0	6	0	Quinces.....½ sieve	4	0	6	0
Muscats.....do.	5	0	8	0	Raspberries.....lb.	0	0	0	0
Lemons.....100	5	0	10	0	Walnuts.....bush.	14	0	20	0

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes	0	0	0	0	Horseradish	2	6	0	0
Asparagus bundle	0	0	0	0	Leeks.....	0	2	0	0
Beans Broad..... ½ sieve	0	0	0	0	Lettuce.....	2	0	4	0
Kidney..... 100	2	0	0	0	Mushrooms	1	6	2	6
Beet, Red..... doz.	1	0	0	0	Mustd. & Cress, punnet	0	2	0	0
Broccoli..... bundle	1	0	0	0	Onions.....	4	0	0	0
Brussels Sprouts ½ sieve	2	6	3	6	pickling.....	4	0	0	0
Cabbage..... doz.	1	6	3	0	Parsley.....	4	0	6	6
Capoteums..... 100	0	0	0	0	Parsnips.....	0	9	1	0
Carrots..... bunch	0	5	0	0	Peas.....	0	0	0	0
Cauliflower..... doz.	4	0	6	0	Potatoes.....	2	6	4	0
Celery..... bundle	1	0	2	0	Radishes dos.	0	9	1	0
Cucumbers..... each	1	0	2	0	Savoy.....	1	0	2	6
pickling..... doz.	0	0	0	0	Sea-kale.....	3	0	0	0
Endive..... score	2	6	3	0	Spinach.....	3	0	5	0
Fennel..... bunch	0	3	0	0	Tomatoes..... ½ sieve	0	0	0	0
Garlic and Shallots, lb.	0	8	0	0	Turnips.....	0	3	0	6
Herbs..... bunch	0	3	0	0	Vegetable Marrows doz.	0	0	0	0

TO CORRESPONDENTS.

SEA-KALE-FORCING (Dorset).—The plants suitable for placing in frames are those with crowns fully an inch in diameter, and such are usually three or four years old from the seed. Plants once taken up and forced are not worth keeping for the same purpose again, though they will gain strength in a year or so, and may then be used, but they are not equal to younger plants, and nothing is gained by keeping them.

SIZE OF MELON-PIT (A. T. S.).—The height of the Melon-pit (fig. 12 in our No. 184) is 7 feet from the floor to the apex, and how you make it only 5 feet we are at a loss to know. You may readily ascertain the dimensions of the pit by measuring the engraving, and reading it off on the scale.

PLANTS FOR A DRY BORDER (A Lady Subscriber).—There are no plants that will flourish in a Clematis-shaded dry south border except the different kinds of Vines, and these we think will be the most suitable for your purpose. Periwinkles might also grow, but there are no flowering plants that will flourish in such a situation for any length of time. Lobelia likes a wet soil, Cerastium might succeed, and it, with Geraniums, would do the best in summer. Stachys lanata will grow well in many places where few other bedding plants will succeed. Thompson's "Gardeners' Assistant" is the best of the works named by you.

ARRANGING FRUIT TREES (M. L. T.).—If we understand you aright you have a hedge 84 feet long on the south, and a wall of the same length on the north, and on this you may have Peaches, Nectarines, Apricots, and Fig trees, or one Grosse Mignonne Peach 8 feet from one end, then an Elrage Nectarine 25 feet from it, then a Brown Turkey Fig 15 feet distant, a Royal George Peach 15 feet from the Fig, and a Moorpark Apricot 15 feet more; and there will then be room for another Apricot 12 feet from the last. You may plant the east and west borders with Pears at 15 or 20 feet apart—say the west with Pears, reserving the east for Plums, Cherries, and Black Currants. The Plums should be planted the same distance apart as the Pears, and the Cherries at 12 feet distance, whilst the Currants may be planted a yard apart, especially if the boarded fence is a high one. We do not think Medlars would please you. We do not know whether we have read your letter aright or not, nor can we make out what is meant by the fence 84 feet long by 18 feet wide. If the wall is covered with trees, and you only wish to plant trees against the boards, then you will not plant the Peaches and Figs, nor any of the fruits named for the south wall, for they will do little good in such a situation, even in Devonshire. The other trees named by you will do well on the east and west aspects. Not knowing the length of the east and west borders we are not able to tell how many trees it would take to plant them.

TAGETES SIGNATA PUMILA AS A BREDDING PLANT — PASSION-FLOWER PRUNING—BIGNONIA RADICANS AND CAPELATA (E. G. H.).—There is more than one yellow bedding plant named Tagetes, of which the yellow varieties of French Marigolds are no mean objects; but Tagetes tenuifolia has yellow flowers, much smaller, but in greater profusion than those of the French Marigolds. It is, however, a tall plant from 2 to 2½ feet high, and is only suited for large groups. Tagetes signata is a fine bedder, but, like the last, is somewhat tall; but its variety T. signata pumila is only a foot or so high, and makes a fine golden mass. It is a half-hardy annual, requiring to be sown in the first week in March in a compost of light loam and leaf mould, and placed in a hotbed. When up guard against drawing the plants up weak by admitting air daily, and otherwise endeavouring to insure sturdy growth. When large enough to handle pot off in three round the sides of small pots, again place in the frame, and keep rather close for a few days, then gradually harden off, and plant out in the last week in May or first of June. They are a little more tender than French Marigolds. You will not gain anything by cutting the Passion-Flower down, and you may lose the plant if you cut to the old wood without any eyes upon it. Cut it in to within three or four eyes of the main stem, or shorten the young shoots to that length in January, which will answer your purpose much better than cutting it down to the roots. If it has a long naked stem it may be cut down to within a foot or so of the soil, and if there be young wood there by all means leave a few eyes on it, for it will shoot again with much greater certainty from the young than from old wood, which may or may not have some dormant eyes. It ought to flower before another Christmas. Bignonia radicans is distinct from Bignonia capelata; the latter is a more tender plant, requiring the protection of a greenhouse, whilst the former is all but, if not quite, hardy. They are, however, somewhat similar, and though distinct enough for large collections, are, perhaps, not so for small gardens. You can grow it well trained to the roof of a greenhouse at a few inches from the glass, either planted out in a border or potted in a good-sized pot, using a compost of turfy loam and leaf mould, with a free admixture of sharp sand. It requires abundance of light and air, and plenty of room.

VARIOUS (T. H.).—The half-calf binding of our annual volume would be about 5s. The insect is a scale (Coccus), and is destroyed by painting over it with soft soap, &c., as often detailed in these pages. The price of Hogg's "Gardeners' Year Book" is one shilling.

TAKING UP GLADIOLI BULBS (A. S. A.).—The bulbs should be taken up when the foliage turns yellow, drying them in a cool dry place, and replanting in spring. Payne's cottage hive, sold by Messrs. Neighbour & Son, Regent Street, London, will suit you.

VINES MILDEWED (D. M. S.).—The Vines may be mildewed from being grown in a close moist house, and their roots being in a rich undrained border. They may not be mildewed for these reasons, nor can any one assign a cause for every attack of disease, though there may be some peculiar state of the juices of the plant which makes it liable to the attacks of insects and parasites. The cure rests in dusting the parts affected with flowers of sulphur whenever the disease presents itself, and this, with attention to the minutiae of Vine-growing, which may be learned from the "Vine Manual," which you can have free by post from our office for thirty-two stamps, will prevent the Vines suffering from mildew. The oil cloth placed over the border in winter will be of great benefit to the roots in keeping them dry, but this will not prevent attacks of mildew. Dust the leaves with flowers of sulphur whenever the mildew shows itself, and this will keep it down, and if persisted in will effectually rid you of it; but do not wet the sulphur and rub the leaves with it, for by so doing you can never reach the parts affected, and at the same time you will injure the leaves. The mildew may or may not re-appear another season.

STAINING OAK-PALING (A Subscriber).—The light colour may be permanently removed by brushing it over thoroughly with linseed oil.

NORTH OF SCOTLAND (A Subscriber, Aberdeen).—The best mode of introducing common Primroses would be to procure some plants in very early spring, and place them in sheltered shady places near you. Our correspondent adds—"Contributions such as that from your friend from Fort Augustus in the issue of November 29th, greatly enhance the value of your Journal in this part of the world; but he omits to tell your readers two things of importance—first, how he grows his Roses, whether as dwarf, half-standards, or standards; and second, what description of stock he has found so successful. He tells us in two rather lengthy paragraphs it is not the Dog Rose, but he evidently, by accident, omits to say what it is. It would be very interesting also to Rose growers in this quarter, where the cultivation of the Rose as standards has been but partially successful, to know your correspondent's general mode of treatment throughout the year, especially his manner of preserving them during winter."

VINE LEAVES (An Old Subscriber).—There are no scale insects upon them, but symptoms of gangrene, intimating, we think, that the roots are not sufficiently active to supply sap for the growth of the leaves, &c. If the roots are outside the house we should cover the border with fermenting dung 2 feet thick, and place over that a tarpaulin, or something else that will exclude excessive rain, or other chilling circumstances.

LAYING OUT AND MEASURING GROUNDS (T. M.).—There is no book specially devoted to these subjects. There is much about them in the first volume of McIntosh's "Book of the Garden."

MONOCHETUM ENSIFERUM LEAVES SHrivELLING (Idem).—It is probably losing its leaves, and the shoots dying back through being grown in too cool a house. It requires the heat of a rather warm greenhouse, though it will do fairly in a dry greenhouse with little water, providing the wood be well ripened in summer.

HEATING FROM A KITCHEN BOILER (W. E. H.).—We should be more certain did we know the exact height of the kitchen boiler and the floor of the conservatory. The lower the boiler beneath the pipes in the conservatory the better—that is, at least for several feet, provided the top of the boiler is closed. As your boiler is open, you can have no pipes in the conservatory higher than the general level at which the water stands in the boiler, in no case quite so high as the top of the boiler. You may use two or three-inch pipes, one within 3 inches or more of the top, and one near the bottom of the boiler, as the connection between the boiler and those in the conservatory. These pipes when in the kitchen may be enclosed in a wood case. These may be placed on the same level in the kitchen, except where they enter the boiler. The pipes must not sink below nor rise above the level of the water in the boiler. If you wanted a heat of from 45° to 50° in cold weather you would need three four-inch pipes in the front of the conservatory. These may all be on the same level, with a shelf over them. Thus the flow-pipe from the boiler could join a double pipe, and these could join at the farther end to receive the one return-pipe. All things considered, we believe the kitchen boiler to be your best mode; but if the boiler is much on the same level as the pipes in the conservatory these pipes must neither rise nor fall.

VINES IN POTS (D. D.).—If you wish to trust your Vines in 10-inch pots we decidedly advise you to let them remain in the same pots, but use rich top-dressing and manure-waterings, and you may even place some good soil below the bottom of the pot in the bed, and let the roots run in it if they choose. A little bottom heat will be serviceable. Do not shift now by any means if you wish good fruit and plenty of it.

STRAWED AS MANURE FOR CARNATIONS (—).—It is a good manure for them, but should be thrown together and allowed to decompose, and then be mixed with three or four parts its bulk of light sandy loam. If not experienced we would not advise you to use it largely.

EARLY GRAPES (J. B. Charlesworth).—To obtain early Grapes in the way you allude to requires considerable experience and care. Allowing the late Grapes to hang till March will require much less care and expense.

VARIOUS (M. H.).—If the Lilies and the Dielytra are very dry at the roots they should be watered before plunging them in the forcing-bed. If fair for moisture—that is, neither wet nor dry, they will absorb moisture from the bed of leaves, and in that case we would not water until the tops began to grow. We would not repot any such plants, but top-dress with rich material. Your proposed house on the north side of the wall will do well for foliage plants and Ferns. You do not say the height, but for a moderate heat you would need at least 120 feet of four-inch pipe to keep stove fine-foliated plants healthy. You could keep Camellias and Azaleas admirably in such a house in winter, or at any time, except when making growth and setting their buds; but then you could not keep Ferns, &c., that required much heat at the same time, as the extra heat would be too much for the Azaleas and Camellias.

BOOK (R. H. A.).—The "Fruit-Gardening for the Many" will suit you. It can be had free by post from our office for five penny postage stamps.

ADDRESS (Stella).—Mr. West, when we last heard of him, was residing at Bournemouth, Hants.

CHRYSANTHEMUMS NOT FLOWERING (*A Young Amateur*).—We have little doubt that stopping them so late as the middle of July was the cause, and certainly so if you live in a cold district.

VINE-GRAFTING (*A Subscriber*).—Take the scions from the Barbarossa at the time of winter pruning, and select such shoots as have the wood well ripened, the joints short or close together, and moderately strong, or about the thickness of the middle finger, not thicker, nor of smaller size than that. Other sizes and descriptions of wood will of course do, but for a strong stock we like the scion strong; but if the stock be young and small the scion should be of equal size, or rather under than above the thickness of the stock. Keep the scions with their lowest ends stuck in moist soil in a cool house. When the eyes of the stock begin to swell, cut it down to within a few inches of the place desired for the insertion of the graft or scion. Choosing a smooth part of the stock, about 6 inches below the point to which the stock is headed down, with a sharp knife take a slip of wood about an inch and a half long from the side of the stock (b), making a clean cut. Take the scion (a), and cut it from behind an eye downwards, so that the outside may exactly correspond with that on the stock. The cut should be made at the lowest end of scion. Next make a sloping downwards cut in the stock, and about three-quarters of an inch in length, and half an inch deep, commencing half an inch from the upper part of the first cut. A sloping cut must now be made in the scion from the bottom upwards, exactly corresponding to the cleft made in the stock, so that when the scion and stock are joined together they will fit into each other. Insert the scion in the stock after heading the scion down to three eyes, taking care that the two fit bark to bark, or, if the stock be thick, on one side at least. On this the success of the operation depends; therefore particular care must be taken to insure the bark of scion and stock being in contact. The scion being adjusted, bind it closely to the stock, but not too tightly, and be very careful not to displace the scion. Matting or Cuba bast is the best for tying. The point of union may then be covered with clay, but if the operation is neatly performed a little sphagnum wrapped round will answer quite as well. If the scion take, the matting may be loosened in about six weeks, and removed altogether a fortnight afterwards; and when the graft grows vigorously that part of the stock above the graft should be cut away, which can be done more safely at the summer than at the winter pruning. One shoot only will be required to train up the rafter, so that the strongest being selected after the scion fairly shoots the other two may be rubbed off. If it



be late before the stock is ready for grafting the scion may be stuck in a Potato. The time of grafting will depend on the time of year when the stock commences growth. So far as we know the stock has no influence on the flavour of the fruit, and a Barbarossa on a Black Hamburg will have the same flavour as if on its own roots, just the same as Peaches on the Plum have no trace of the flavour of Plums.

SHIFTING HEATHS AND AZALEAS (*A Constant Reader, Dunbar*).—When the plants have done blooming and are beginning to grow, is a good season to shift these. March is a good time to shift Heaths; April, May, and June for Azaleas blooming in the months preceding those named. Mildew on Heaths is chiefly caused through a damp close atmosphere, for which there is no remedy but more efficient ventilation.

PYRACANTHA PRUNING—CHRYSANTHEMUM CUTTINGS—FERNS POTTING—CAMELLIA-BUDS NOT EXPANDING (*Rosebud*).—The Pyracantha should be pruned in spring, cutting out or thinning the shoots, so that they may not overgrow each other nor grow too far from the wall. By training in some young shoots from the bottom between the old, you will probably obtain berries at the bottom as well as the upper part of the shrub. Pot the cuttings of Chrysanthemums singly in small pots, and place in a gentle heat where they will soon root. When rooted harden off and winter in a cold frame, protecting from severe frost by a covering of mats. Pot in March into 24's, stopping the plants to five leaves; pot again in May into nine-inch pots, and if large plants are desired, transfer them to 12 or 13-inch pots early in July. A compost of turfy loam and leaf mould, two-thirds of the former to one of the latter, will grow these plants well, adding a little sharp sand if the soil seems deficient of it. The plants may be stopped in April to make them bushy, again in the latter part of May, and for the last time by the middle of July. The most suitable time to pot Maiden-hair Ferns and all Ferns, is before or when they begin to grow, and that time is March or the beginning of April. The Camellia does not expand through an imperfect root-action, and there is no remedy but to plunge in a mild bottom heat, with a top heat of 50° by night.

FRUIT TREES ON AN EAST WALL (*Under the Shade*).—We have no doubt that Pears would do the best on clay soil in a damp climate. You do not state the height of the wall. If it be low (10 feet), one tree will be sufficient; but if more than that height two will be required. By the Duchesse Pear of Jersey, we presume you mean Duchesse d'Angoulême, a noble-looking Pear, but with us not first-rate from a wall, though rich and melting from espaliers. We think Marie Louise, in season in October and November, and Glou Morceau, in season in December and January, will suit you. It will be a good plan to dig a rather large hole and put in some good loam or rich compost so as to give them a good start. There is no better stimulant for Vines in such a position as yours than applications of weak liquid manure once or twice a week. The Arums died down through the dryness of the situation we should think.

GRAFTING ROSES ON THE MANETTI STOCK (*A Subscriber and Lover of Roses*).—Prior to grafting your stocks should have been established a year in pots. You may, however, do as you say, pot them now or not until you graft them in February, and then plunge them in a hotbed. You may graft before potting, and you will need no clay, only graft low enough that the point of union can be covered firmly with soil, leaving three or four buds of the graft above the surface. Whip-grafting is the best mode, and that will render it necessary to head down the stock at the time of grafting. Owing to the stocks not being established a year in pots, the plants will only make moderate growths the first season. Except some few of the Hybrid Perpetuals, and these, the dwarf and moderate growers, all do well on the Manetti stock. To give names would only be repeating them from a catalogue.

DISEASED PEAR TREES (*Pyrus*).—The cracked fruit and blotched leaves indicate that the roots do not supply sufficient sap. Remove the soil from above the roots within a circuit of 4 or 5 feet round each tree, and replace it with fresh soil mixed with well-decomposed stable manure. Mulch over the roots in summer. Your Mosses are—1, *Bryum ligulatum*; 2, *Hypnum loreum*.

VARIOUS (*C. E.*).—We have carefully read over your two letters. We regret we cannot give you a correct section of the Muscat-house at Enville, as at this distance of time we might make a mistake in some minute matters. We will, however, privately put you in a way for securing what you want. Meanwhile the description given at page 354 of an early viney would supply much of what you want for an early Muscat-house. In a house 14 feet wide we would have three four-inch pipes for bottom heat, either covered with rubble or, better still, in a chamber with slate over it, and 6 or 8 inches of rubble over the slate, and then from 20 to 24 inches of open turfy soil. The rubble with openings would secure thorough drainage. One reason why the Vines planted in old Pine-beds in large houses, after all the tan was removed, and suitable soil was put in its place, were more affected with mildew than in the case of Vines planted out of doors, we believe to be owing to the want of drainage, and perhaps the want of heat at the roots. If two four-inch pipes had been placed in the bottom of these old Pine-beds, rough rubble or stout slate placed over them, 6 or 8 inches of rubble above that, with a few little openings in the front wall of the pit to let out extra moisture, and then plenty of piping for atmospheric heating, so as to give plenty of air, we believe that mildew could scarcely be present, or continue long if it did make its appearance. In such circumstances we have seen fine Grapes produced free from all disease, as the roots and tops were completely under control. We have seldom seen a more elegant house for Pines than the section shown at page 355, and commanding more conveniences. Were that house to be used for an early viney or Muscat-house we would prefer the house to be 1 foot or 15 inches higher at the ridge. We would require no pits, but have a latticed path underneath the ridge, four pipes, as now, in a shallow chamber, rubble above, and then the soil, four pipes in front above the level of the shelf shown, and two at back close to the wall. The Vines to be planted behind the front pipes and in front of the back pipes—say a foot distant in either case. But we feel convinced that in saying this your judgment is quite as much to be relied on as ours. Your present long range of houses facing south-east would be much improved by a hipped roof. So far as we recollect the sash-bars and glazing were old. The heavy rafters and sash-bars gave a great amount of shade. The capping of the rafters might be reduced with advantage, and when fresh sashes were wanted, the glazing with large instead of small squares would be a great advantage. It is impossible in your climate to have too much sunlight if you have ventilating power to counteract it when necessary. We should approve of your proposed arrangements for such a new range, and a large tubular boiler, or even a saddle-back would answer. If we have any preference for the former it is because it is easier fed with fuel from the top. If you use the whole square for forcing purposes we would prefer having two boilers to use combined or separately—the one as a reserve. It is too much risk to have such a square of forcing-houses depending on one boiler. After seeing much, and experiencing much, and incidentally speaking well of some boilers, our real opinion is that there is but little difference between them when well set and well wrought. As to iron houses, they have the advantage of lightness and durability, and if well painted and carefully glazed—that is, neither tight nor loose, they will answer the purpose quite as well as wood if the sashes are fixed. Houses will ever be more economically managed if the roofs are fixtures, and the ventilators placed back and front, independently of the roofs. For general purposes it is a good plan to have the rafters and main supports of iron, and the sashes of wood. Great lightness will thus be secured, and the houses will require much less firing than if all the bars were also of iron. Paint as you will, iron roofs will cost more for fuel, and require more ventilating power in summer. One great drawback in iron roofs is that if neglected as to painting the drip from them is ruinous to all vegetation beneath them. Wooden houses are now built very light, but where much was done and fine effect an object, before building it would be worth your while to look at the houses of Mr. Bewley, Blackrock, near Dublin, where some arrangements will be found worthy of adoption, or affording hints for our practice. We rejoice to know that the grounds at your ancient place are likely to be laid out so beautifully. You will find some good hints in the "Vine Manual" published at our office.

INSTRUCTION (*A Young Under-Gardener*).—We should have answered you sooner but your letter was overlooked. We should recommend you to select Trentham.

BRITISH FERNS (*W. W. Denslow*).—Mr. F. Y. Brocas, of 25, Hart Street, Bloomsbury Square, can supply collections of Ferns as required. Mr. Brocas has for some time been preparing sets of Ferns and other plants for Christmas and New Year's presents.

NAMES OF FRUITS (*D. O. R.*).—They must be local varieties, for we do not recognise one of them. They probably came from the cider district.

NAMES OF MOSSES (*C. P.*).—1, *Hypnum alopecurum*; 2, *Bryum ligulatum*; 3, *Marchantia*; 4, *Dicranum scoparium* (approaching *Dicranum majus*); 5, *Dicranum scoparium* or *Dicranum liliifolium*; 6, *Polystichum undulatum*; 7, *Hypnum splendens*; 8, *Hypnum dendroideum*.

NAMES OF PLANTS (*Trevallyn*).—1, *Polypodium vulgare*, and 2, its var. *cambricum*; 3, *Blechnum spicant*. (*C. D., Westmeath*).—1, *Lastrea dilatata*; 2, *Asplenium adiantum-nigrum*. (*G. L.*).—*Calanthe vestita*. (*A. Welshman*).—1, *Maxillaria*, perhaps *aurea-fulva*; the specimen is insufficient; 2, Next week; 3, *Lomaria borealis*; 4, The young barren frond of some *Lomaria*, perhaps *lanceolata*; 5, *Pteris cretica*; 6, *Asplenium bulbiferum*. (*M. C.*).—1, *Cyrtium falcatum*; 2, *Adiantum concinnum*; 3, *A. reniforme*; 4, *Selaginella robusta*; 5, *Selaginella* sp. (bad specimen); 6, *Aspidium hispidulum*; 7, *Selaginella pubescens*. (*A. Welshman*).—3, *Selaginella Galeottii*. (*A. Lady Subscriber*).—1, *Lastrea dilatata*; 2, *Selaginella pubescens*; 3, *Asplenium marinum*; 4, unnameable from such a bad specimen.

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

BRAHMA POOTRAS.

In discussing the purity of any breed, the defence must depend somewhat on the nature of the attack. The assail-

ants of the poor Brahmas are of two kinds. On the one hand they are hybrids; on the other, they may be pure, but only a variety of Cochins. Much has been written on both these points. Were the first position tenable, should we not, long ere this, have arrived at instances of the Chittagong, &c., &c.? and, when I say *we*, I do not mean I—by myself, I—in my alphabetical capacity—but all those Brahma breeders who have no other object in view than truth; for, in starting, it may be at once laid down as certain that the question of purity, even if settled adversely to the Brahmas, would not shrink their admirers, whose name is legion. We have learnt to value them for their many useful properties, which, as was lately noticed by one of your correspondents, other breeds do not possess; and I suspect we shall stick to them. Certainly, if we did so during the many years of suspicion and coolness, more certainly now, when they may be called the popular fowl, and when schedule-framers are beginning to find out that they enter well.

Looking to either method of attack, the question of history and origin is a matter of importance; but is it an essential? Is it a *sine quid non* of a pure breed? If so, our "pures" will be sadly curtailed. Let us turn to the "Poultry-Book"—that beautiful work which one of "our Editors" assisted in giving to us lovers of fowls—what do we find there?

Dorking: "We have sought for information as to the time when Dorking and its fowls first became noticed, but our inquiry has been fruitless." The history and origin of the Dorking, though styled *par excellence* in that book the "English fowl," is involved in uncertainty.

Spanish: "Best Spanish have been obtained from Holland." There is a very probable reason assigned; still it is very strange that the best should have migrated to Holland.

Hamburgs: Origin uncertain.

Game: No account given, simply that they are essentially English.

Cochins: These seem undoubtedly to have come from Shanghai; but, despite the efforts made to call them by their right name, Cochins has stuck to them.

Polands: "Which of these is to be considered the Polish birthplace we are not specially informed, nor does it appear probable that any inquiries, however carefully conducted, are now likely to settle the question." "With Poland, certainly, we have nothing to connect these birds."

Now, in these two latter breeds we have a country giving its name to certain breeds, yet having nothing to do with them. May not this be the case with Brahmas? I know nothing of Dr. Bennett, but it is possible that, having got at the source of the Brahma, he may have given it the name of Brahma Pootra for the very purpose of misleading others, whilst, perhaps, they may be found somewhere on the American continent. Nay! he may have gone further—he may have stated the descent as a cross for the same purpose of misleading; and, as Barnum had something to do with them, it is more than probable that all we know from American sources is "Hum!" To all this we can only say, if history and origin are essential, what must be said of the many established and pure breeds that have not got any?

Hybrids, it is allowed, return to one or other particular type; and as the Brahmas have been with us some fifteen years—I have myself kept them some eleven or twelve—it is time they reverted, if they ever intend doing so. Still they show no signs this way; but, on the contrary, they have become more settled, and points of feather are actually being insisted on. This is a hybrid, forsooth!

I turn again to the "Poultry-Book" ("Brahma Pootra," page 177), and there I read, "There are birds of the Malay and Shanghai families by whose union such colours would probably appear." To this is appended a foot-note, that in 1853, at Farningham Show a pen of fowls was shown very similar to the Brahmas, and stated to be a cross between Malay and Speckled Dorking. Yes, but were these feathered? I know not. The "Poultry-Book" then continues—"If the test of like producing like for several generations should be successfully afforded by Brahma Pootras, other grounds must be sought for by those who would consign this alleged variety to the comparative ignominy of a hybrid origin." I would draw especial attention to these words. It appears to me that the Brahmas have bred true to feather—that

like has produced like: therefore Brahmas, using the argument of "our Editors," are not of hybrid origin.

If this part of the argument is satisfactorily disposed of, let us see whether they are only a variety of Cochins. Were I asked the question, I should reply as distinctly as I could, Certainly not. To decide this very knotty point, let us see what are the characteristics of a pure breed. According to notes from "our Editors" I gather that many distinctions which our sharp-sighted predilections discover amount to nothing, and only prove a variety. I set these aside, therefore, not that I consider them of any importance, and I take these words of "our Editors" as my guide—"If a bird is like another in its form and plumage, they are of the same species." While I write these words I fancy I hear my old bird crowing—he happens to be miles and miles away—as though he would say, "Do not spare them. Hit them hard, though they have got plenty of friends;" and thus encouraged I turn again to the "Poultry-Book." There I find the back of Cochins described as "flat." This description is followed by that of Mr. Sturgeon, no mean authority, by-the-by. He says, "*drooping forward, with the hinder part consequently raised.*" These italics are my own. When I bred Cochins, and loved them dearly for many years, I liked my birds to rise from shoulders to tail. I believe the best birds are so now. I put it plainly to all my brother Brahma fanciers, Is this the form that we desire in our pets? Certainly not. On the contrary, we desire a drop from the shoulders to the tail; the very reverse, in fact, and in the "Poultry-Book" I also find this given as characteristic of the Brahma.

Again I find a decided difference of form in the brow as compared with the Cochins. It may be argued, these differences come from the Malay origin, but by the previous extracts from the "Poultry-Book" I consider the hybrid question disposed of.

There is a further difference in form in the tail; not only is it longer and more upright than that of the Cochins, but the sickle feathers separate, curving outwards like that of the Black Cock. This I have not seen in Cochins. In the Brahma hen I have frequently seen what I consider the equivalent of this—one feather on each side separate from the rest.

I think, too, there is no question amongst those who have eaten both that there is a greater depth of breast in the Brahma.

Are these "differences of form" sufficient? If not, I have failed. To those who do not think them sufficient I tender yet a few observations. Are the differences of form between a reddish-faced Spanish and a whitish-faced Black Hamburg as marked? The combs are immaterial, and it will be observed that I have laid no stress upon the form of the Brahma comb, now generally seen. Again: are not these differences greater than between Game and Game Bantams than those that exist between Black Hamburg and Black Bantams?

When to the differences of form, considered essential by "our Editors," we, who have watched them closely, detect differences of character in the Brahmas to the other variety; but to all it is but fair to say, if they are not hybrids they are equally distinct from Cochins. The characteristics have been noticed at various times lately in your pages: one that I have not seen noticed is the greater precocity of the cockerel—he crows earlier, &c. All these help to prove the position. But I have chosen to stake my hobby on the difference of form, and as I have said before, prove them the veriest mongrel, I shall not think one iota the worse of them. Were I compelled to resign all save one, then Brahmas for me.

In conclusion, dear Messrs. Editors, let me say that your late quotation of "A man convinced against his will," &c., admits of another application, and may be used against yourselves as well as against those who think with—Y. B. A. Z.

[We have never had a doubt, and we still have no doubt, that the Brahma Pootra fowl is a variety of the Cochins-China, and if ever a fact was satisfactorily proved, then the fact is proved that they are only a variety. In the first place we have positive evidence that the variety was produced by cross-breeding between a Cochins-China and a Chittagong fowl, and here let us remark, that cross-breeding is totally different from hybridising. A hybrid is the pro-

duce, usually barren, between two different genera, as between the horse and the ass. A cross-bred is between two species or varieties of the same genus, as between a cart-horse and a racehorse. Hybrids, when they are not barren, usually breed back to one of the forms of the original parents, as when a hybrid is produced between a Linnet and a Canary; but a variety, when not a mere accident, will continue to propagate itself truly. Thus all the Cochin-Chinas breed true, though differing merely in colour.

We accept the sentence as our own, that "If a bird is like another in its form and plumage, they are of the same species;" and we would willingly abide by the decision which any ornithologist would arrive at, who knowing nothing of the dispute, had a Brahma Pootra cock and hen shown to him by the side of a Cochin-China cock and hen of the same age. There may be slight differences in the slope of the back; there may be more meat on the breast (fully accounted for by the Chittagong cross); there may be other slight variations, but these cannot shake any man's judgement who sees the birds side by side, the characteristics of the breed, in form and in plumage, are borne by both.

We see no force in the observation, that the origin of other breeds of fowls is not known, unless it be to strengthen the conclusion as to the Brahmas being a variety, for their origin is known. Nor do we see that the Black Bantam resembling in some respects another black breed, proves more than that the latter may have ministered to procure the colour of the other, just as the Game cock has ministered to produce the Game Bantam; similarly the Chittagong ministered to produce the Brahma variety of the Cochin-China.]

COCHIN CHINAS AT BIRMINGHAM SHOW.

THE report of the Birmingham Show shows a falling-off of £100 in poultry sales compared with last year. This is, no doubt, to be attributed in a great measure to the holders of birds being unwilling to dispose of their best specimens. Capt. Heaton refused £25 per pen for his two first-prize pens of Buff Cochins, and the gentleman who offered this would doubtless have given a higher price, but Capt. Heaton declined to sell; £15 15s., was also refused for another pair of Buff hens; £10 10s., for a pair of Buff pullets; and £15 15s., for a Buff cockerel, and I have no doubt that many other large sums were refused in other classes. These came under my own notice.—C. F. E.

POULTRY-KEEPING FROM A COMMERCIAL POINT OF VIEW.

I PURPOSE including in this essay directions for natural and artificial hatching, as well as rearing and fattening chickens, also furnishing plans, elevations, sections, and details of the buildings and apparatus required. In so doing I shall endeavour to avoid all technical expressions, and I shall not touch upon topics which have no immediate concern with poultry breeding from a commercial point of view; but I shall confine myself exclusively to giving publicity to such facts as I have proved by actual experience.

I must, however, caution my readers not to be startled by the novel plan of hatching, rearing, and fattening poultry which I advocate, and of which they cannot find corroboration in any book; and I advise them, before criticising the principles herein put forth, to well weigh all that is stated, and I am confident that every one will admit that they are based upon sound sanitary and scientific laws.

THE NECESSARY APPLIANCES FOR SUCCESSFUL POULTRY BREEDING.

An impression universally prevails that poultry cannot possibly be bred with profit except on farms, and then only when bred in large numbers. This is a mistaken idea, as a few head of poultry will yield proportionately as much profit as any larger number. For instance: whereas, in large establishments heavy expenses are incurred for buildings, rent, machinery, and labour, these charges do not occur with the amateur breeder, who attends to his poultry personally. It is true that large establishments can buy their grain cheaper, and grow their own vegetables; but this, again, is compensated with the amateur, by his obtain-

ing a better price for his eggs or poultry, even if used for his own consumption, than the large breeder, who is obliged to sell his produce through a salesman at wholesale prices.

However, to obtain such satisfactory results it is absolutely necessary to observe certain sanitary laws in the construction of the poultry home, and see that the dietary scale is in conformity with the confined state, and, in fact, providing the poultry with an equivalent of such food as they could pick up when in a free state.

The poultry home I suggest is applicable alike to amateurs and large breeders, and is intended for the accommodation of one cock and six hens for breeding, or twelve hens for laying, and twenty-four half-grown chickens; and as the same principle must be carried out whether in small or large establishments, it follows that where it requires only one home for seven, twelve, or twenty-four birds, it will require 100 homes for 700, 1200, or 2400 birds, and so on, in proportion to the magnitude of the breeding establishment. This plan has, moreover, the advantages of keeping the races and sexes separate, of affording the means of easy inspection, and of extending and multiplying the homes gradually with the growth of the establishment, besides facilitating the labour in feeding and hatching and the sanitary requirements.

Another erroneous idea entertained is that poultry will never thrive well in a confined state; whilst, in fact, they will thrive much better, and be much more productive, than when left roaming about, in all weathers, in search of food, provided the directions given hereafter be implicitly followed. However, it is so far true, that poultry confined in a damp place, ill-ventilated, and not afforded a diet adapted to their confined state, can never thrive. But whose fault is this? Why it might as well be said that a person cannot thrive during solitary confinement, when it is well known that prisoners with a regular diet, comfortable cells, and appropriate labour, soon become very sleek and healthful in appearance, and that in proportion there is less disease and fewer deaths in prisons than among the free population, who are compelled to seek a precarious living in all kinds of weather, and whose home is a wretched hovel, deficient in all sanitary requirements. Moreover, farmers have now for a number of years carried on successfully, in confined spaces, the rearing and fattening of cattle, which are called stalled cattle, and which system, although nominally more expensive, is yet far more profitable than the ordinary method; and why should the same system not be extended to poultry?

In general the management of poultry is considered of too little importance, and is left pretty well to chance. It is true that of late years poultry exhibitions have created a taste for poultry breeding; but this is confined solely to amateurs, and what may be called fancy poultry breeding. Yet, amongst all domestic animals, the fowl is, in proportion to its cost or keep, the most profitable and useful; and hereafter I will prove, by figures obtained by actual experience, that poultry can be reared and sold at the rate of 4d. per pound, leaving a handsome profit to the producer. Now, such results, particularly when butchers' meat is 10d. and 1s. per pound, and, moreover, daily rising in price, in consequence of the increase of the population, and the decrease of pasturage, ought to prove a sufficient stimulant to the public at large to give a little more attention and consideration to an increased production of such valuable animal food, which, by proper management, could, within a very few years, become as much the food of the poor as it now forms a delicacy for the table of the rich.

However, to obtain such favourable results, it is absolutely necessary to carry out the instructions given hereafter as regards the construction of the poultry home, the sanitary arrangements, and the dietary scale.

A POULTRY HOME

Ought to consist of four separate compartments, exclusive of the glass-covered passage, which runs the whole length of the building, to facilitate the service at all times and in all weather.

- 1st. A roosting and laying compartment, or bed-room.
- 2nd. A glass-covered run, or living-room, in which they can be confined in wet weather.
- 3rd. A hatching-room, or state bed-room.
- 4th. An open run, or park.

THE OPEN RUN.

Starting with the well-ascertained fact that poultry cannot possibly thrive or be kept in good health on damp ground, it becomes necessary, where the surface is not gravelly, to make an artificial dry run. This is best accomplished with concrete, which, besides being cheaper than flag-stones or bricks, does not absorb the moisture, and is much warmer to the feet. This run should be formed slightly concave, as shown in fig. 1, and have an incline towards its end, where the rain water can be discharged into a drain communicating with the duck pond.

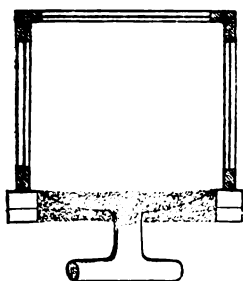


Fig. 1.
Transverse section of floor for open run, showing also drainage.

During summer a few inches deep of gravel, and in winter about 9 inches deep of horse manure, ought to cover the floor of this run, which will afford the fowls ample exercise by scratching and running.

The sides and top should be formed of galvanised iron netting, of about 1½-inch mesh for full-grown poultry, and 1-inch mesh for chickens.

In fine weather the food should be thrown broadcast in this run, but in wet weather the poultry ought to be fed from feeding-vessels or fountains (see figs. 2, 3, 4), placed in the roosting-room, near the door of the covered run.



Fig. 2.
Drinking-fountain.

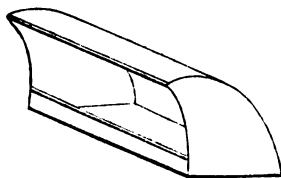


Fig. 3.
Feeding-trough.



Fig. 4.
Section of feeding-fountain.

Some persons recommend the sides of the run to be boarded to the height of 2 feet, to prevent the cocks of the adjacent runs fighting together. This, however, in so narrow a run, would partially exclude the sun, which is not desirable; besides, cocks, after a few days' acquaintance, become very neighbourly.

The above fountains are constructed on the principle that, when placed with their openings towards and about a foot from the wall, the poultry will be unable to scratch any dirt in, nor can the droppings from the perches fall in.

THE GLASS-COVERED RUN.

The floor of this compartment should be composed of at least 6 inches deep of finely-sifted gritty stuff, such as road dust, ashes, and sand, and on this it would be well to sprinkle occasionally some flowers of sulphur, which would prevent vermin breeding on the fowls. It is the universal belief that fowls powder themselves to get rid of vermin on their body; but such is not exactly the case. The fact is fowls, like all the other feathered tribe, perspire freely, particularly so in the night. This perspiration clogs their feathers, consequently they perform their ablution in gritty dust, on the same principle that human beings do in water, to get rid of the dried perspiration, and to expand their feathers. The same can be seen performed by the birds of the air, who, on a dry hot summer day, make their ablutions in the dust of the roads.

In this run the fowls must be kept close during wet weather, as wet feathers are most injurious to their health, particularly when they are confined.

The sides of this run should be boarded, and occasionally whitewashed. The glass frame forming the roof should be made to open the same as a forcing-frame, so as to admit of free ventilation. A perch ought also to be fixed in this compartment, and the door communicating with the outer run should, in the winter time, be closed at night.—G. K. GUYLIN, Civil Engineer, London.

(To be continued.)

THE LEEDS POULTRY AND PIGEON SHOW.

THIS exhibition of poultry, though numbering more than seven hundred pens, was doubtless injured materially by the fact that Lord Tredegar's annual meeting was held this year simultaneously at Newport, Monmouthshire. The consequence was that many pens entered by their proprietors for both meetings were finally reserved for exhibition at Newport, not a few owners supposing that the competition would be less severe than at Leeds, and, as a necessary result, the chances of their own success at Newport would be greater. It is really amusing that, after so much previous provision, so many mistakes of judgment should have arisen, for certain it is that in Spanish, Dorkings, and Cochins the competition at Leeds was the very reverse of severe, and the probabilities necessarily are that had they been present at Leeds, pens out of the prize list altogether at Newport might have (in these particular classes), been successful prizetakers.

The arrangements of the pens at Leeds were excellent, and the care taken of the birds betokened rather that they were overfed than the contrary. It should always be remembered that too great a supply of food after long travelling is equally undesirable for poultry as "short-commons," the want of exercise tending to produce indigestion, more especially in such specimens as are not accustomed to exhibition.

In Spanish fowls Mr. Teebay, of Preston, took the first prizes for both the old and also the chickens; though very excellent birds, they were not shown in the high exhibition trim we have so frequently seen them. Of the remaining Spanish fowls little is worthy of mention, save that one or two pens lost position altogether from the amount of "trimming" that had been adopted prior to sending them. This practice is now unfortunately so prevalent that a portion of our Spanish fanciers seem to think the removal of actually every vestige of feather on the face is an improvement—a mistake the loss of premiums will best tend to remove, and abolish altogether.

The Dorkings of Sir St. George Gore were good, and well shown; but the paucity of Dorkings of even a medium class was painfully apparent to every one.

So many of the pens of Cochins were empty (although the entries were not a few), that it was really a difficulty to find suitable pens to receive the premiums of the Society, these three first-named classes being quite the least favoured in the showyard.

The Game fowls exhibited at Leeds were, however, very good, and the classes well filled. Of all specimens, perhaps, the Brown Reds had the call in their favour, though many of the Black-breasted Reds were extraordinarily good.

In Hamburgs, excepting the Silver-pencilled old birds, it is very rarely we see so good a display—a remark as universally applicable to the classes generally as to the prize birds only. The Spangled varieties of either colour were one of the chief points of excellence at Leeds, the competition being extended throughout both classes.

The Silver Polands were perfect, both old and young ones, and it will be seen to this breed the Society's silver cup was awarded. The Any variety class was an extensive one, and contained many very unusual varieties; the class for Extra Poultry being scarcely less interesting.

DORKINGS.—First, T. Rogers, St. Helens. Second, A. Wilcox, Nalms Court, Bristol. Third, E. Smith, Middleton, Manchester. CHICKENS.—First, Sir St. G. Gore, Bart., Wicksworth. Second, C. W. Brierley, Middleton, Manchester. Third, F. Key, Beverley.

SPANISH.—First, R. Teebay, Fulwood, Preston. Second, J. Marchant, Halifax. Third, W. Newsome, Leonard Place, Bingley. CHICKENS.—First, R. Teebay, Fulwood, Preston. Second, W. Newsome, Bingley. Third, W. Cannan, Bradford.

COCHIN-CHINA.—First, R. White, Broomhall, Park, Sheffield. Second, H. Beldon, Bingley. Third, C. W. Brierley, Middleton, Manchester. CHICKENS.—First, C. E. Ridsdale, Halifax. Second, Rev. F. Taylor, Kirby Lonsdale. Third, C. Sedgwick, Riddlesden, Kelghley.

GAME (Black-breasted and other Reds).—First, M. Billing, jun., Erdington, Birmingham. Second, J. Hodgson, Bowling Old Lane. Third, C. W. Brierley, Middleton, Manchester. CHICKENS.—First, E. Aykroyd, Gillington, Bradford. Second, Capt. Heaton, Lower Broughton, Manchester. Third, T. Briggs, Fearncliffe, Bingley.

GAME (White and Piles).—First, R. Butcher, Chesterfield. Second, A. Robertshaw, Queensbury, Halifax. Third, W. Whiteley, Liversedge. CHICKENS.—First, R. Butcher, Chesterfield. Second, E. Aykroyd, Gillington, Bradford. Third, G. Wostenholme, Sheffield.

GAME (Any other variety).—First, E. Aykroyd, Gillington, Bradford. Second, G. Wostenholme, Sheffield. Third, W. J. Pope, Barnsley. CHICKENS.—First, E. Aykroyd. Second, Sir St. G. Gore, Bart., Wicksworth. Third, J. Firth, Lilly Lane Mills, Halifax.

GAZE COCK (ANY VARIETY).—First, E. Arkroyd, Gillingham Road, Bradford. Third, W. K. Duxbury, Primrose Road, Leeds. Commended, G. Poulton, Kirby Misperton.

HAMPSHIRE Gold-pencilled.—First, H. Beaton, Bingley. Second, J. Preston, Alverstoke, Bradford. Third, A. Smith, Northwold. **Chickadee.**—First, E. Hemmingsway, 46, St. Mark's. Second, S. Smith, Northwold. Third, J. Gower, Wharfedale, Bradford.

HAMPSHIRE Silver-pencilled.—First, Sir St. G. Gore, Bart., Witley. Second, D. Kingworth, Bury, Croy. Third, H. Beaton, Bingley. In Leeds.—First, Sir St. G. Gore, Bart. Second, H. Beaton, Third, J. Preston, Alverstoke, Bradford.

HAMPSHIRE Silver-spangled.—First, Sir St. G. Gore, Bart., Witley. Second, H. Beaton, Bingley. Third, J. Walker, Harts-Park, Aylesbury. **Highly Commended,** C. Cowburn, Gals, Leeds. **Commended,** N. Marrow, Wotton, Manchester; W. Birman, Wainwood, G. Gower, 10, St. John's, Leeds; Sir St. G. Gore, Bart., H. Beaton, Bingley. **Highly Commended,** J. Crookes, Bradford. **Commended,** W. W. Nodds, Sale, near Manchester. **Commended,** W. K. Duxbury, Primrose Road, Leeds.

HAMPSHIRE Silver-spangled.—First, Sir St. G. Gore, Bart., Witley. Second, H. Beaton, Bingley. Third, H. Beaton, Bingley. **Highly Commended,** A. Smith, Wainwood, Wotton. **Commended,** C. Cowburn, Gals, Leeds; Sir St. G. Gore, Bart., H. Beaton, Bingley. **Highly Commended,** H. Beaton, Bingley. **Commended,** J. Nodds, Sale, near Manchester. **Commended,** J. Crookes, Bradford.

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PIGEONS.

In Pigeons no previous meeting of the Leeds Society has been so successful, every class being well represented. A pair of grand Duns Carriers took the silver cup, and well indeed they deserved it. The Pouters were also capital. Almond Tumblers were very limited, only two pens being shown, but both good. The Owls were also first-rate specimens. Pouterals were shown numerously, but not so clean and zood as we hoped for. The classes of Nuns, Barbs, Doves, and Jackbills deserve special mention. Classes expressly assigned to Swallows and to Marble Pigeons were, of course, quite new to the generosity of donors, nevertheless they were well supported, and with perfect representatives of these singular breeds. The class for Any other variety of Pigeons contained some very beautiful pairs of Pigeons. This class was evidently quite a popular attraction, and one of the most interesting in the exhibition.

The weather at the commencement seemed threatening, but in the whole proved more satisfactory as time wore on.

Columba.—First and second, and Society's Silver Cup for best pen of any breed of any breed of poultry in the exhibition, H. Beaton, Bingley. **Highly Commended,** A. Smith, Wainwood, Wotton. **Commended,** C. Cowburn, Gals, Leeds; Sir St. G. Gore, Bart., H. Beaton, Bingley. **Highly Commended,** H. Beaton, Bingley. **Commended,** J. Nodds, Sale, near Manchester. **Commended,** J. Crookes, Bradford.

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TURKISH Any other variety.—First, W. Cannon, Bradford. Second, H. Yardley, Birmingham. **Highly Commended,** J. R. Jesson, Hall; C. Cowburn, Gals, Leeds. **Commended,** J. Hey, East Parade, Huddersfield.

Owls.—First, H. Yardley, Birmingham. Second, J. W. Edge, Aston New Town, Birmingham. **Highly Commended,** J. Hey, jun.

FANTASIA.—First, J. Thackeray, Pottery, York. Second, F. Elm, Baywater, London. **Highly Commended,** E. Horner, Harewood, H. Yardley, Birmingham. **Commended,** W. Masson, Gidney, W. Masson, Gidney, W. Masson, Gidney.

W. Cannon, Bradford. **Commended,** J. R. Jesson, Hall; C. Cowburn, Gals, Leeds. **Commended,** J. Hey, jun.

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WEIGHTS OF PRIZE POULTRY, AND MATTERS RELATING TO THE BIRMINGHAM SHOW.

I RECEIVE so many letters, and see so many statements, about the weights of prize poultry, that I am tempted to give you the following remarks. I regret to say that last week, only four days after the great Birmingham Show, the Aylesbury drake shown by me, and which was in the second-prize pen there, suddenly died, apparently from no cause whatever, and I found he weighed 6½ lbs. Previous to going to the Show he was upwards of 10 lbs. This is the largest weight, I believe, ever attained by either Aylesbury or Bantam. He was allowed to be, by all who saw him, the handsomest bird ever bred, and was but nine months old.

Let me add a few words about Geese. It was remarked at Birmingham, by many, that no pen of adult Toulouse Geese was from my yard. I had sold my old birds, the winners for four years running, at that show and elsewhere, and which always weighed from 73 to 75 lbs. the three; and I did not think their descendants good enough to win, so I did not send any. Justice of my surprise when I found the winning pen weighed the miserable weights of 37 lbs. the three; whereas my gander alone weighed 34 lbs., and those which I did not send weighed 34 lbs. the three. I mention this that the public may not give undue preference to White over Grey Geese. I cannot understand the judgment about the White geese. According to your paper the first-prize birds of Mrs. Seamounts weighed 57 lbs.; mine, when they left home, weighed 63 lbs., and on their return weighed 61 lbs., and were only commended.

Now, as to Bantams. We must all congratulate ourselves on the magnificent show of these splendid birds; and although they do not attain the weight of Aylesburies, nor are they noted for such early maturity, nor are they such prolific layers, yet their seeming adaptability for most parts of the country makes them justly popular. I must confess I think the Judges very sparing of their favours. There were many pens fit to win at any show entirely passed over, and which I must attribute to the miserable provision made for them by the managers of the Show. Nothing could possibly be worse than the position of all the water bowls. No one could see them except he went down on his hands and knees, and then, from the depth of the pens, the frightened creatures rushed into the farthest corners, and were quite out of sight. Why did not the Committee raise these pens about 15 inches from the ground: this would have enabled all to have been seen.

I would also suggest that in future only a gander and goose, and a Turkey cock and one hen, should be shown: there would be a much larger entry, the Committee would save money in feeding, and the exhibitors a large sum in

carriage; and the other shows through the country would soon follow the example. This is of the greatest importance just now, as I am told the railway companies have ordered that poultry should pay fifty per cent. more than any other class of goods! I must say I think this one of the most monstrous and disgraceful acts on the part of the railway companies that I have ever heard of. It really means that they will put a stop to most of the poultry shows throughout the kingdom; and why they should do this I cannot conceive. I hope you will write down this attempt at extortion, and prevent, ere it be too late, this gross imposition. Here is a capital opportunity for the Poultry Club to show its utility, by raising an agitation, and by its members all uniting in a remonstrance against the project. Already the charges are excessive, and ought to be reduced.—JOHN K. FOWLER, *Prebendal Farm, Aylesbury.*

[Not only the Poultry Club, but all exhibitors of poultry, and all committees of poultry exhibitions, should unite in memorialising the directors of such lines as so unjustly and short-sightedly have raised the charge for poultry carriage, request to be informed of the reason why it is so raised, and endeavour to remove the reason assigned. Failing in this, we would have it stated in Parliament as one of the instances rendering it desirable to have the railway monopoly abated; because, let it be remembered that the question of terminating that monopoly in many lines will soon have to be debated and decided by the Legislature.]

OLD COMB.

MR. S. BEVAN FOX in the report of his apiary for 1864, states that the comb in one of his straw hives, although eight years old, "appeared by no means worn out." This shows the wisdom of Mr. Woodbury's advice at page 244 of the Journal, where he counsels us, as a rule, never to "resort to comb-pruning with the view of rejuvenating old stocks."

Seldom, if ever, do old stocks die simply from their combs having become, through age, unfit for breeding purposes. At all events I never met with a case, and I have seen some very aged hives.

Those managed on Nutt's system and in which swarming has been effectually prevented, are in a few years left with aged and effete queens, which besides being unable to keep the population up to the mark, may perish in winter or at a time when their loss cannot be repaired.

Those old stocks, again, in which swarming is allowed, are left with the younger queens, and if the season is advanced or proves wet and unfavourable, they may meet with an accident in their wedding flight, or through impregnation being retarded, turn out drone-breeders, and thus bring ruin on their hives. Besides, stocks which give out swarms are sometimes left with a very small population at the close of the season, and are, consequently, unable to bear up against the rigours of winter. In addition to these evils the stores of old stocks which have given out swarms are often greatly reduced, not only by what the young brood has consumed, but by what the swarms have carried off. I, therefore, regard, not comb old and unfit for breeding purposes, but paucity of numbers, poverty of store, and accidents of one kind and another as the destroyers of old stocks. I have seen the bees demolish 3 or 4 square inches of old and unfit comb composed of worker-cells, and insert comb with drone cells in its place. I say then, with Mr. Woodbury, As a rule, leave the bees to themselves to renew their aged combs.—R. S.

FOUL BROOD.

It is certainly most singular that the position of pupae in foul-breeding stocks should be found reversed. Whether such peculiarity may yet afford a clue to the elucidation of the greatest of all apiarian mysteries—foul brood, or is simply a cortortion of weakness or approaching dissolution, a turning of the face to the wall, as it were, remains yet to be explained.

In the black stock sent "A DEVONSHIRE BEE-KEEPER" last year to be liguriansed, ere yet he had discovered the cause of his "dwindling apiary," and which had been infected from his Ligurians, he informed me of having discovered, on cutting up a royal cell, a defunct princess in this novel pro-

dicament. I looked on the matter at the time, as very possibly did my esteemed correspondent, as purely accidental. On foul brood showing itself generally in my apiary in the end of last season I was very much puzzled at finding worker brood so placed, and on making a renewed acquaintanceship with this vile scourge this season paid particular attention to this, and invariably found the diseased grubs reversed, the only stray exceptions to the rule being defunct embryos that had evidently advanced a stage or two further before their demise, and were, besides, not in so foul or rapidly decomposing a condition.

Noticing that the attention of the Entomological Society has been directed to this subject, it would be of the highest importance to apiarians generally were some member of that learned body to take up and investigate the point—say by making a daily microscopic comparison during the coming season of the evolutions of the pupae from the egg upwards, in a diseased and healthy stock, thereby detecting the exact stage, if not the cause of the change of posture and demise.

The above allusion to this season's experience of foul brood reminds me that my contributions to the apiarian corner of "our Journal" have fallen grievously behind, and if occupation with other matters do not supervene, some older jottings may be pardonable during the dormant season, when, generally, there is a greater lack of more stirring events.—A RENFREWSHIRE BEE-KEEPER.

OUR LETTER BOX.

TO POULTRY BREEDERS AND THE TRADING COMMUNITY GENERALLY.—Has any one had dealings with a person calling himself Thomas Andrew, writing on letter paper headed Andrew Brothers, African Merchants, 43, Dale Street, Liverpool, and what was the result?

CROSS BETWEEN WHITE COCHIN-CHINA AND SILVER GRAY DORINGS (W. T.).—Never having seen the progeny from this cross-breeding we cannot give an opinion upon them. We should expect them to be good table fowl.

BRIGHTON SHOW (T. C. H.).—You will find a notice of this show at p. 463.

DARLINGTON POULTRY SHOW.—Mr. Kershaw, Ashton-under-Lyne, informs us that his Cochinchina cock (any variety) was "highly commended" at this Show.

WHITE BANTAMS (J. W.).—We most unhesitatingly say, Select the small birds. We hardly know what to call good ears, as the white ears are not imperative in them, as in Black Bantams. Where other points are equal, there can be no doubt whatever that smaller size should turn the scale in favour of the birds exhibited.

TAIL OF PARTRIDGE COCHIN-CHINA COCK (Cochin-China).—One or two white feathers are not a disqualification. It is common in old birds. The only feather-disqualification is red, or blotched breast.

BRAMA POOTRA PULLET STAGORRING (Country Rectory).—Administer castor oil freely, in doses of a tablespoonful. If this fail, you may bleed from the comb, but do not cut off any of the points or serrations. Feed entirely on soft food, as bread, meal, &c.

VARIOUS (Rouen).—You must choose your breeds. Brahmas, Spanish, Cochins, and Crève Cœur, and also La Flèche, will do well in a small space. You do not say you mean to rear chickens. If you want only eggs you will not require to change your cock. If you wish to breed only Brahmas you must keep with them Crève Cœur or Spanish; they lay white eggs, the Brahmas brown. Give them as much sun as you can. If your yard is paved, cover it with loose gravel an inch or two deep, and supply them with turfs, cut with plenty of mould. No bird bears confinement worse than a Dorking. Three, or at most four Ducks, are enough for a drake. They do not require to be fattened from the time of hatching; but a bird that is intended to be a winner at some time must always be kept in the highest condition, and may be put up for a fortnight before it is sent to a show, for the purpose of increasing weight. A Duck is never in better condition than at ten or twelve months old, but she often gets heavier as she gets older.

PROFITS OF POULTRY-KEEPING (R. F. E.).—Poultry-keeping, on a small scale, will help a man to live, but will not secure a living, we think; but we commence a series of papers on the subject to-day. New-laid eggs in the winter are very profitable.

WEIGHT OF BANTAMS (E. H.).—There is no fixed weight for any but the Sebright Bantam. These should not exceed—cock, 17 oss.; hen, 14 oss. A Bantam cannot be too small. The hen is out of condition. If she wants medicine, give castor oil. The appearance you speak of is indicative of poverty; feed well, and, as the laying season comes on, the comb will be red.

EARLY BROOD OF SILVER-PENCILLED HAMBOURGERS (Poultry).—Let your chickens have good sound, and not weak beer to drink. Give them greens, bread and milk, cooked meat chopped fine. Feed them after dark and before daylight by candlelight. Always recollect you have sixteen hours night to eight of daylight, and you must lessen the consequences by late and early feeding. Let the rip with the hen under it be in a sheltered and dry place. Let it be warmed, but it does not require to be artificially warmed. The later they are fed at night the less necessity there is for early morning feeding.

PARTRIDGES.—On the 7th inst. some amusement was created in the quiet little market town of Lutterworth by a covey of five or six Partridges alighting in the centre of the town, causing an immediate scramble amongst those persons who happened to be in the street. Nor is this a solitary instance—on the Wednesday previous one bird was captured in the same locality, and on Sunday last two more were also taken. Can you give me any information as to the cause?—A SUBSCRIBER.

Excessive terror from being pursued by a hawk was the probable cause. A Pheasant about three years since was flushed before the County Hospital in the centre of Winchester.]

WEEKLY CALENDAR.

Day of Month.	Day of Week.	DEC. 27, 1884—JAN. 2, 1885.	Average Temperature near London.			Rain in last 37 years.	Sun Rises.		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock before Sun.	Day of Year.
			Day.	Night.	Mean.		m. h.	m. h.	m. h.	m. h.	m. h.	m. h.	m. h.	m. h.			
27	Tu	St. JOHN THE EVANGELIST.	45.7	29.6	36.1	24	8 48	55 43	28 6	2 8	28	1 34	302				
28	W	INNOCENTS.	46.8	29.3	36.6	11	9 8	55 3	18 7	8 4	29	2 4	303				
29	Th	David Don died, 1841.	45.0	32.3	38.1	17	9 8	56 3	7 8	12 5	1	2 33	304				
30	F	Royal Society founded.	44.7	32.6	38.7	15	9 8	57 3	48 8	27 6	2	3 2	305				
31	S	Joseph Sabine died, 1837.	44.2	32.5	38.9	11	9 8	58 3	23 8	44 7	3	3 31	306				
1	Sun	1 SUNDAY AFTER CHRISTMAS.	45.4	31.3	37.4	12	9 8	59 3	19 10	22 10	4	4 0	1				
2	M	Laurusinus flowers.	42.5	31.3	37.4	15	8 8	0 4	45 10	39 11	5	4 23	2				

From observations taken near London during the last thirty-seven years, the average day temperature of the week is 45.2°, and its night temperature 31.3°. The greatest heat was 68° on the 28th, 1855; and the lowest cold, 1° below zero, on the 28th, 1860. The greatest fall of rain was 0.79 inch.

PLANTING AND TRANSPLANTING.



GENERALLY speaking the removal and planting of trees and shrubs is an operation to be performed in the months of September, October, and November, according to orthodox rules. But,

then, as regards myself, I happen to be one of those selfwilled individuals who follow no conventional rules in connection with garden operations, and as gardening is a matter of business with me, the fraternity will probably stigmatise me as perverse and headstrong. Be that as it may, whenever I find it desirable or necessary to remove and transplant trees or shrubs, and I have a convenient opportunity, I put aside all considerations as to the time of year, and submit only to the negative dictates of frost and much wet. I have transplanted trees and shrubs in the middle of summer and in the middle of winter, in spring and in autumn, the after-treatment, of course, being influenced by the weather, and never have I found that the success or failure of the operation could be directly or indirectly traced to the mere season of the year at which it happened to be performed.

This assertion may be diametrically opposed to the opinions of many of the most able and experienced gardeners, I nevertheless adhere to it, and even deny that the best time to remove trees is when there is plenty of moisture in the ground; in other words, when there is sufficient moisture in the soil to cause it to hold together in solid spits. I like it best when it will crumble, and run in among the fibres and roots, and this I find it will do best in the summer time, when the ground is comparatively dry. Much, I am aware, depends on the nature of the soil, and if it is naturally crumbly and light, probably the best time to plant trees in it is the autumn or winter; but even this I will not venture positively to assert, for I have invariably found that, no matter what the soil is, newly-planted trees are likely to do best when the roots start into action immediately after planting. This is certainly not done in the winter, unless the season happen to be unusually mild; and although the trees may sustain no injury from remaining a long time inactive, it does not disprove what I affirm.

Some years ago I assisted in removing a number of evergreen shrubs from one garden to another: they were taken two or three at a time on wheelbarrows to a distance of about half a mile, and the weather was both hot and dry, the period of the year being about midsummer. As each was planted a basin was formed around it, the soil being in a crumbly state. This basin was filled up twice with water, which seemed to run the soil in amongst

the roots, and leave them as though they had never been removed. They took to the soil immediately, and I never knew fresh-planted shrubs do better. I thought at the time that it was incurring too great a risk, as the shrubs were fine specimens; but the result proved that all my fears were groundless, and if since then I have had occasion to remove trees or shrubs at any period of the year I have never hesitated to do so. The weather subsequent to the operation will suggest such precautions as are necessary to insure safety—that is, in the way of shading, syringing, mulching or watering, and staking in case of high winds. These precautions are often necessary, and the neglect of them is more frequently the cause of failure than the supposed wrong time of the year.

I would not, however, have it understood that I am advocating summer planting in preference to autumn or winter planting. There are cases in which it would be entirely out of the question to perform such operations in the summer on account of the pressure of other work; nor does what I assert affect this matter in the least. What I would recommend is not to be bound by usage, nor to be led by would-be clever theorists, who describe minutely how the tree should be taken up, how the hole should be dug, how the soil should be trodden over the roots, the month, the week, or even the day on which transplantation should be performed, and such matters of detail as are far better left to the discretion of the operator.

Many gentlemen lay out large sums of money in the purchase of trees and shrubs, and make extraordinary mistakes in the planting and disposition of them, simply, it appears to me, for want of a few practical lessons, and partly, perhaps, from being unacquainted with the nature of the trees which they plant, or their knowledge being confined to the simple fact that trees should be planted with their roots downwards. This is rather a limited knowledge of vegetation; but judging from the manner in which many trees are treated one would think that it was also the extent of the knowledge possessed by the planter. For instance: a gentleman owns a field or paddock, and desires to have a belt of trees round it. He goes or sends to a nursery for one or two hundred young forest trees, and they are planted, the turf being replaced close around their stems. While the owner is congratulating himself on the pleasure he will experience in soon having a plantation of vigorous young trees, some of them are dying, and the rest do not grow. How is this? The nurseryman who supplied them is blamed; it must be his fault in supplying bad trees. What else can be the reason? Trees are pointed out as growing vigorously in neighbouring fields, with the grass extending up to their trunks, just as he would like his own to be, and he cannot see why they should not. Now, I would simply inform him that the grass growing under an old-established tree is merely there on sufferance, the tree has the mastery, and will not allow the grass to attain more than a certain degree of strength; but with fresh-planted trees the case is different, the grass pushes out fibres long before the tree, and the roots are down among those of the tree before the latter have made a single fibre.

In fact, the grass abstracts all the moisture from the ground at the time of the year when the tree requires it most, so that the latter is left to starve, consequently it does not grow. The gentleman, however, cannot see this, and blames the nurseryman; but if he will take a useful hint, and look nearer home he will find the remedy. When the trees are planted let the ground be kept bare of herbage as far as the roots extend, and this until the trees are thoroughly established.

In another case the trees are planted in gravel or sand, and in this they cannot grow from want of nutriment. The nurseryman cannot very well be blamed in this case, for the cause of failure is obvious, and the want of success is at once attributed to it. In consequence of this discovery the owner orders the surface of sand or gravel to be removed, and two spadefuls of strong manure to be placed close to the stem of each tree; or he orders each to have half a pailful of good strong liquid manure; so they are poisoned, and eventually succumb to their fate. Possibly the gentleman employs a gardener, who well knows that liquid manure beyond a certain strength will injure, perhaps kill, his Cabbages, and he will possibly suggest that the stuff might be a little too strong. Well, then, the gentleman will buy more trees, and treat them to liquid manure in a weaker state; but even then somehow or other they do not grow. Now, I would suggest that newly-planted trees have neither the mouth to imbibe nor the stomach to digest liquid or even solid manure, and that trees require plain soil to fibre into; consequently if a good-sized hole had been made in the gravel for each tree, this filled up with common soil, and the trees planted in it, they would probably have done well, and, when established, pushed their roots into the gravel, and derived a certain portion of nourishment from it.

It must not be supposed that I have merely pictured imaginary possibilities; for I have seen instances of what I have described, and have known gentlemen purchase valuable shrubs and trees to plant on their lawns; but, as a rule, the practice has been to lay the turf close up the stems after planting. Two-thirds of those which I have known treated in this way have either died or barely existed, and this I can ascribe to no more likely cause than replacing the turf over the roots. I have frequently taken off the turf round coniferous and other trees, removed some of the soil, and have noticed that in almost every instance, except after continued rains, the ground has been hard, dry, and seemingly impervious to any amount of rain. It is evident that such are not the conditions in which a tree could be expected to grow and flourish; it is worth while, therefore, to take a lesson from the fact, and in planting trees, especially those which are valuable, to leave the surface of the soil bare for a certain space round the stems when they are planted on lawns. Let a neat circle be cut in the turf, and the appearance will be quite as good as if the turf had been laid close to the stems. This will go far towards insuring the safety of the trees both by permitting rain and artificial waterings to sink down, and saving the trees from the drying and exhausting influence of the grass, which takes up the moisture for its own support.

There are other circumstances in connection with planting trees and shrubs which it would be worth while to notice, for it is astonishing how little attention is given to the subject by a large number of gardeners, young ones in particular, who apparently consider it a matter scarcely deserving more than a passing thought. Numbers of trees are thrust into the soil with torn and bruised roots; others are buried much deeper than they ought to be; many have the soil thrown in solid lumps on the roots, this being often trampled and trodden until it becomes as hard and solid as it is possible to make it, as though planting a tree were an operation differing in no respect from setting up a post or scaffold-pole. Then, again, fresh-planted trees are left all the winter to sway and twist about with the force of the wind; which alone would prevent the roots taking hold of the soil. These and other shortcomings are not at all uncommon, and appear to result from a thoughtlessness that in effect is as culpable as wilful carelessness or neglect. The old axiom, that "what is worth doing at all, is worth doing well," applies in all its force to planting trees; for it is by no means pleasing to the owner nor creditable to the operator when, after planting a number of trees or shrubs, a

large per-centage of them die, leaving ugly gaps, which must be, and are, eyesores to all who behold them. The neglect of such precautions as are necessary to insure success cannot be excused on the score of taking up too much time; for to plant a tree well, and as it should be, does not take a minute longer than to plant carelessly. There are, it is true, causes of trees dying which are not always under the control of the planter, and for which a certain allowance ought to be made; but, then, it is undeniable that careless planting is productive of more failures than any other cause that I am aware of, and this must be my apology for offering these remarks.

What I have said refers more particularly to that class of gardeners who have no under gardener or other assistance, and many of them perform such work as planting in a manner far from creditable to themselves or the vocation which they assume to represent. It is not too much to assert that nothing can be of more consequence, as a rule, than the success or failure of fresh-planted trees, since they are ever before the eye, and criticised by employers and visitors. The character of the planter is, consequently, involved, and it would be well for him to give his attention a little, or, rather, much, to the art of planting, and not be contented simply with relying upon the facts that a hole must be dug, the root of the tree placed in it, and the soil returned and trodden over. Any labourer knows that much, and can do as much; and if the gardener desires, as he should, to receive credit for a little more understanding, he must show it in the way he performs his work.—F. CURRY.

FLOWERS OF THE PAST SEASON.

GREENHOUSE PELARGONIUMS.

WHEN the objection is made that flowers are being continually brought before the public which are no improvement on kinds already in growth, there are a few things to be considered before condemning the raisers and distributors. The perfection to which many of our most favourite flowers have been brought is such, that a very slight improvement is often all that we can hope for in the colour or form of the flower; but this improvement is often combined with an improved style of growth, which greatly enhances the value of the variety; and this is a step greatly needed in some of our best flowers even yet. Thus, one of the very finest Pelargoniums of the past season—Achilles, has in point of colouring reached a climax which can hardly be surpassed; but then its style of growth is such that it is impossible ever to make a good plant of it. Raisers must, then, try if they cannot get such a flower on a robust style of growth. Then, again, some varieties are over-robust. The foliage is so coarse, that, although the blooms are good, yet they are either too sparingly produced or else smothered by the foliage. When I make such observations I have not in my mind the needs of exhibitors, but of the general grower. A painstaking trainer can make an exhibition plant in course of time out of almost anything, even as Sergeant Popkins will, if you only give him time, convert the veriest Johnny Chawbacon into a smart and well-set soldier; but amateurs who never think of exhibiting, and yet who desire to have a good show of Pelargoniums, do want to know which are those best suited for the home stage, and it is their wants that I would ever bear in mind—exhibitors can and will take care of themselves.

As usual, Messrs. Hoyle, Foster, and Beck have supplied the new flowers; the productions of the two former going to Mr. Turner for distribution, and of the latter to Mr. B. S. Williams. I have had, thanks to them, the opportunity of seeing their flowers in my own little greenhouse, and of taking notes from day to day of their qualities. In this way a more satisfactory conclusion can be arrived at than from a mere cursory glance at an exhibition or in a nursery; and although it is very possible there may be mistakes in the following lists, yet the remarks are made according to the best of my ability, and may, I think, be depended upon.

MR. HOYLE'S.

These deserve the first place, for unquestionably he is the best seedling-raiser that we have, and his flowers always appear in large numbers in every winning set of exhibition

plants, and, moreover, amongst his lot were decidedly the best flowers of last season.

Artist.—A very fine large flower. Upper petals very dark; lower, a clear bright rose; white centre. A bold-looking flower, and the habit of the plant good.

Achilles.—A flower of the most brilliant colouring, orange ground, strongly marked; upper petals dark beautiful maroon with fiery crimson edge. Habit of plant very weak, difficult to grow.

Diadem.—A rosy purple flower, and with a deeper shade of colour in it, with a bright white centre. Quite a novelty in this shade of flower. Top petals very dark, narrow border of bright carmine. Habit of plant good. A first-rate flower.

Emmeline.—Orange rose lower petals; very dark maroon top, margin of bright carmine.

The Prince.—Clear rich orange flower, white centre; top petals maroon, broad border of carmine. Very free-flowering, and of good habit.

Royal Bride.—A white flower; top petals, large deep blotch, narrow bright border. No improvement on other similar flowers as far as my judgment went, and in that of a friend and neighbour whose opinion on these points is worth having.

Amy.—Peculiar shade of purple, with very large trusses, but a gross habit of foliage, which detracts from its value.

Alexandra.—A shaded lilac rose flower; top petals bright scarlet rose, with small blotch. A novel-looking flower of good habit.

Lord Eversley.—Very free flowering; of excellent quality and rich colours. Light centre; top petals bright maroon, with narrow shaded margin.

Cherry Ripe.—Bright rosy orange; centre white. Very fine. Blotch not very dense. Good habit.

Phantom.—Lower petals rather long, white throat; flowers somewhat loose, but striking in colour.

A few of Mr. Hoyle's flowers I had not the opportunity of seeing, so cannot say how they have turned out—such as *Aristides*, *Peerless*, *Penelope*, and *Philo*. Of those enumerated above the best are unquestionably *Artist*, *Achilles*, *Diadem*, and *Alexandra*. *The Prince* and *Lord Eversley* are well worth growing.

MR. FOSTER'S.

Belle of the Ball.—A strongly-coloured painted flower; somewhat long lower petals; top petals quite black, margin rose; eye white and clear.

Rienzi.—Painted carmine lower petals, black maroon top petals; narrow crimson edge.

Princess Helena.—A little rough. Very dark, in the style of *Topsy*. Lower petals painted.

Miss Burdett Coutts.—Rose-coloured flower, not of first-rate quality.

These flowers have all, more or less, the fault which I have always found in Mr. Foster's flowers—that they are not sufficiently broad in proportion to their length, and which I have no doubt excludes so many of them from the exhibition stage; still they are improving, and with a little foreign blood infused into them would be much better. They are very rich in colour, and their habit is generally fair, so that there is only this change needed. *Belle of the Ball* and *Rienzi* are the best of those named.

MR. BECK'S.

Display.—Very dark heavy spot; nice dwarf habit, but somewhat too long in the petals.

Maggie.—Pretty light spot; very free flowering; shape good, and habit very dwarf. An excellent variety.

Princess of Wales.—Bright rose colour; very bright, but not constant.

Spotted Nonpareil.—Excellent dwarf habit; free bloomer; the colour bright and rich. An excellent variety.

Hector.—Good smooth flower; colour bright rose, white throat, dark shaded spot; habit good. A very pleasing flower.

Diana.—Habit of the plant dwarf; lower petals painted; top petals very dark, with margin of scarlet rose. An excellent variety.

Paris.—Smooth flower, but common in colour, and in no respect remarkable.

The Charmer.—A nice, smooth, rose-coloured flower of fair average properties.

We have already had some very excellent flowers from Mr. Beck, and some of the above are in habit all that we want, the growth short-jointed, plants "stocky," as the phrase is, and the bloom freely produced. The flowers may not have, perhaps, quite that refinement (I know of no better term to use), that Mr. Hoyle's have, but they are some of them such as an amateur will delight in for their style of growth. As far as I could see *Maggie*, *Spotted Nonpareil*, *Hector*, and *Diana* are varieties that will be found well worth growing, and will keep up the credit of Mr. Wiggins, who has given us many very beautiful varieties.

It is impossible not to see that the *Pelargonium* is still amongst our most favourite flowers, although, from the present style of exhibition, the same plants are too often, from year to year and from show to show, placed before our eyes. If more encouragement were given to smaller plants, I am persuaded it would be more popular than ever; it possesses so many advantages, is so easily grown, is so free-flowering, and continues for so long a period in bloom, that from cottage to palace it finds a home; and it is quite a pleasure, in our neighbourhood at least, to see how the old worthless kinds in cottage windows are being displaced by better and newer varieties. Again are there new candidates for public favour, and amongst them probably the very finest *Pelargonium* ever raised, *John Hoyle*. On these I hope to report in due season.—D., Deal.

HOUSE SEWAGE.

REMOVED as I am from the great centre of practical thought and speech, I appear to myself as a humble worker upon the outskirts of the earth, creating in my little sphere motives for my own forces to exert themselves on, and occasionally using the press as my safety-valve. I find it a great blessing thus to be able to occupy my mind independently in a little exclusive borough, where scarcely a neighbour feels sufficient interest in one's proceeding to wish one good speed, nor inclined to take any advantage from my undertakings for their personal interests. Mr. Fish in his "Doings," expressed a wish that I would further enlarge upon the subject of sewage soon after I wrote about it in May last (Vol. VI., page 365). I will not repeat what I then said, but as the question is very important to the country, and is becoming very popular, as well as out of regard for the request of Mr. Fish, I willingly take it up. A few words as to the past. It is thirty years since (I was then a boy), the great utility of sewage and liquid manure became impressed upon my mind by accident. I have, with but a few years' intermission, used it ever since, and fifteen years ago, in my first article in this Journal, I touched upon the utility of sewage, and I have every year since adverted to the subject, both in these columns and in those of four other periodicals.

To help to reconcile opinions, I think it well to send some specimens of our fruit for you to pronounce on, and if you find that it possesses any quality worthy of mention, you may chiefly attribute it to the supplies of sewage which the trees have been accustomed to receive. I could not arrive at flavour in this soil, even when I had twice taken up the trees experimentally and changed its texture. Till the happy idea of sewage came to aid me Pears were scarcely equal to Turnips, and the Apples were on a par. It is seven years, I think, since I first sent you some of the same sorts from the same trees to taste, in consequence of the improvement in flavour after the first summer's supply of sewage, and the trees have never since had any other manure, for we keep neither horses nor pigs, and dung is very expensive.

I feel that I cannot take so firm a grasp of my subject as I could wish, unless I revert somewhat to the state of this garden on my introduction to it. From inquiry I found out that it had long been considered a piece of ground quite worn out, and occasioning more expense to cultivate than it was worth. It had been upwards of two hundred years under fruit and vegetables, and the miserable specimens which I saw and the appearance of the whole were so different from what I had been led to expect, that any person not accustomed to look beyond the surface would certainly have been disheartened. To examine the subsoil was my first proceeding. I found that it had never been disturbed since the garden was made, and, consequently, that the soil

in time could probably with honest treatment be brought back to what it was at first, a sound gravelly loam. About 3 feet deep a natural clay presented itself, and this made me decide at once for drains. It is now seventeen winters since, reckoning in the present, a re-arrangement of the ground took place and it was drained; plain-trenched I cannot say that it was, for what with new fruit-borders, shifting walks, and so on, a great body of soil was removed to new positions. Care was taken to keep the bottom spit down as much as possible. Rotting wood and *débris*, the accumulation of several years, and famous as a preserve for rats, were cleared out of the back yards, and added as the completion and planting went on, and this was all the manure afforded. Just before sowing-time next spring soot and salt were applied as a top-dressing, and the greater part of the ground was cropped with Potatoes. The result was upwards of two hundred sacks per acre, of a sort of Kidney much grown about here at that time, excellent as a cropper but worthless to eat.

This example serves to show the beginning of a principle upon which old gardens can be renovated, and let me add, all holdings, be they great or small, agricultural or horticultural. For my own part rather than allow the excuse of want of dung to distress me, I would delve into and break up the most uncongenial subsoil as a means of compensating for the want. I had no liquid-manure tanks here, neither from the state of affairs with which we had to contend for some years would the idea of making them have been entertained; but as time rolled on hard cropping began to tell once more on the soil, and the knowledge that the nourishment which it required was running daily away to pollute the river, caused the masons to be set to work to form a tank. From one, in due course, we advanced to two, and also two large soft-water tanks, which catch the rain that falls on the roof of the house and outbuildings; and, as if human nature were never satisfied, I want another of each kind. The ground here has never shown any signs of exhaustion since I have used the sewage; of course it also receives the decayed vegetable matter, tree leaves, and other rubbish annually collected on the premises, with the addition of the decayed manure of a two-light hotbed judiciously applied, occasional dressings of lime rubbish, or a few bushels of quicklime, and the sweepings of chimneys. Still these additions would not be nearly sufficient to keep the soil productive without the application of the sewage.

Having arrived at this point, I will now try to describe the manner in which I apply the sewage to the land, and in order to do so intelligibly, I have taken measurements, and made calculations, the results of which will, I hope, come within the comprehension of the least informed of my readers, and meet the wants of the smallest operator.

I will take as my basis an area of 44 square yards of turf, covering the roots of our largest Apple tree. Our largest sewage tank holds 850 gallons (not including the unpumpable sediment), which would weigh about 4 tons. Our hand-wagon holds 30 gallons, and by this I have been enabled to know the exact quantities I have allowed for the above space. Three hundred gallons of sewage to the 44 square yards is as much as this soil will carry, and I avoid dribblets as I would the plague. Except with light, sandy, and gravelly soils, one can pretty well judge when the ground is thoroughly saturated, for then the water will run from the surface.

I withhold sewage from fruits and vegetables till such time as they most require it. I give it to the Cabbage family, and all succulent plants at periods from their young strength up to production; to the pod-producers from their midgrowth up to the last gathering; to fruit trees in the open ground as soon as the fruit is set and established upon the trees, and again when it is half grown; to Vines from the time of the berries setting up to the first indications of colouring; to orchard-house trees in pots from the fruit being well established up to the first signs of its ripening. I give a good soaking once a-week; and this applies with me to flowers in pots, even up to the time of their ceasing to bloom, and to Roses, evergreen shrubs, and deciduous trees down to the Filberts, or to any spare ground during the winter, and according to the amount of sewage manure at command. For fruit-borders, previous to the application, I slightly fork over the surface, and for turf under Apple

trees I ply up the surface with the same implement gently, to allow of the sewage sinking in, and prevent its running off by the surface.

On the supposition that 300 gallons of sewage have been given to our Apple tree a week or so after the falling of the blossom, and that the Apples are beginning to swell, when they sorely tax the tree for nourishment, then apply 300 gallons more, and so that the extremities of the roots may receive the greatest share. The quantity will then, in two waterings, have amounted to 600 gallons to the 44 square yards of ground, and that is the proportion which I allow, whether the space be large or small, using judgment, however, and having regard to the thorough saturation of the soil, of course, making allowances when this is in a wet state. I water with the sewage in a dry time if possible, and on the third day I work over the surface of the soil with a scratch-trident, for if this operation were neglected the moisture would be rapidly evaporated. Though we may be sure that the soil would not part with any of the manurial particles added to it by the sewage, let it filtrate downwards, or evaporate upwards, still the condition in which its nutritive properties are most available to the spongioles of the roots is when the soil is kept open, warm, and moist.

Now, as 44 square yards are to 4840 (the number of square yards to an English acre), so are 600 gallons to 66,000, or 310 tons 11 cwt. 3 qrs. 20 lbs.—say 310 tons 12 cwt. From chemical analysis I learn that 1250 tons of London or Edinburgh sewage are equivalent to 1 ton of Peruvian guano, the present market price for which would be, I believe, £13 12s. 6d. per ton. Then, according to the above calculation, 310 tons 12 cwt. of Woodstock sewage would be equal to 4 cwt. 3 qrs. 20 lbs. of guano, and in value to £3 7s. 1d. per acre, presuming the Woodstock sewage to be equal in strength to that of London or Edinburgh. I have no reason to believe that it is less so; for the sewage of this house does not become intermixed with waste water, every drop of which is made use of for some household purpose before it enters the tanks, which also receive the excreta from the closet, and soap-suds. The quantity of sewage from this small establishment that I have distributed to the garden in the last twelve months has been 8250 gallons, weighing 38 tons 16 cwt., calculated to be equal to 2 qrs. 13 lbs. of guano, worth 8s. 4d., which cost rather staggers one by its insignificance, when the immense results that we have derived from it are taken into consideration. It is quite evident that there must have been other manurial agents at work in the sewage, besides that equivalent in guano in a liquid state, fit to be absorbed by the young rootlets of the plants and trees. At any rate I consider the system is paying us fifty per cent., notwithstanding that our sewage wagon has recently had a new bottom, and the pump-bucket and hose require repair.

As respects deodorisation, I require but little assistance, as the sewage here is seldom allowed to remain long enough to become offensive; and I generally, during the summer time, give my sewage-waterings in the evening, and by next morning I find that the bad smell has almost disappeared, in consequence of the gases being absorbed by the soil. Connected with one of the tanks, however, there is a drain leading direct from the scullery, and, there being no stink-trap, I generally use a disinfectant, for the house-servants complain of the effluvia in the kitchen; and, what is worse, they complain of Mr. McDougall's disinfecting powder, which I have for a long time been in the habit of using; they declare it has a pitchy smell of its own worse than that of the sewage. I used the box of powder which was sent to me from your office early this spring as a disinfectant for the tank and drain in question, and it immediately took away all bad smells, and left none of its own. I really wish I could find out whence it was obtained, in order that I might procure some more. I think you informed me that Mr. Fish had a box of this powder sent to him. Did he try it? A half-peck or so, qualified by a bucket of water, as we do soot or lime, to be stirred into 600 gallons or so of sewage a few hours before making use of it, and then the utensils dusted with the powder through a coarse dredger after they were used, completely destroyed the bad smell. I use McDougall's powder now in the manner described, and I do not know of its equal for the purpose, excepting the powder above mentioned. Mr. McDougall, for

his sewage works at Carlisle, I read, uses a liquid disinfectant; it may possibly be a better ingredient for the purpose than his powder.—UPWARDS AND ONWARDS.

HAGLEY HALL.

THE SEAT OF LORD LYTTLTON.

A PLEASANT walk of a mile from Stourbridge led to the lodge gates. Having entered the carriage-drive a portion of the diversified scenery of the park is seen on the right; turning to the left by the stables, visitors are requested by a notice on the gate to proceed through the small pasture field, and ring the bell at the garden entrance.

On entering is a small flower garden, gay at the time of my visit with Scarlet Geraniums, Calceolarias, Verbenas, Lobelias, &c. A large Juniper, its drooping branches loaded with red berries, was likewise an attractive object. Further on is the kitchen garden of six acres. The first house we entered was the stove, which contained good specimens of *Stephanotis floribunda*, *Bignonia venusta*, and the usual assortment to be seen in such places. There were a Cucumber-pit 50 feet long, a vinery 50 feet long, containing good bunches of Black Hamburgh and White Nice; a Peach-house, 30 feet long by 15 wide, with fine healthy trees of *Grosse Mignonne* and *Noblesse*. A fruit of the latter weighed 10 ozs.; and Mr. Mackie said it was but little more than the average weight of every one on the tree. A second vinery, 30 feet long, contained fine bunches of the *Barbarossa*, a favourite late Grape here. The plant-house, 30 feet long, was filled with *Camellias* and a good collection of *Chrysanthemums*. The fruit-room contained a choice assortment of Pears and Apples, such as one can only expect to see in Worcestershire, and a few other localities favourable to their growth and maturation. The Dahlias were worthy of notice for their size, beauty, and constancy. The best, where every one was good, were Bob Ridley, Dodds' Minnie, Triumph, Dr. Hogg, Garibaldi, Lord Russell, Mrs. Crisp, Warrior, Mount Vesuvius, Merrivale, and Loveliness. In the pleasure-grounds are noble clumps of *Rhododendrons*, and a large specimen of the *Pampas Grass*. A summer-house, with stained-glass windows, represented the seasons, as described by Thomson; and among the forest trees was a Larch that measured 11 feet 3 inches in girth 3 feet from the ground, and having a straight bole 50 feet high.

It may be interesting to the reader to know that this beautiful park and grounds, of about one thousand acres, were laid out by the first Lord Lyttelton, assisted by his friend Shenstone. We are told that the manner of laying out ground in the natural style was quite in its infancy when Shenstone began, about the year 1750, to carry out his ideas of rural elegance, and by degrees he brought his own place, The Leasows, to such perfection that, long before he died, his little domain had not only attracted the notice and procured him the acquaintance of persons the most distinguished for rank and genius, but had become the envy of the great and the admiration of the skilful—a place to be visited by travellers and copied by designers.

The first object that attracts attention in the park is the Grecian temple, situated on rising ground; then a pedestal dedicated to Thomson, with a Latin inscription. The next is Jacob's well, with the rectory-house, on the brow of a distant knoll, partly visible through the trees. Further on is the dingle, with a rivulet meandering through the valley; then another testimonial of friendship, with the following lines—

To the Memory of
WILLIAM SHENSTONE, Esq.,
In whose verse
Were all the natural graces;
And in whose manners
Was all the amiable simplicity
Of pastoral poetry,
With the sweetest tenderness
Of the Elegiac.

On, still on, to the Rotunda, whence there is an exquisite view of the dingle. The rivulet that runs along the bottom is dammed into pools, and one of them is seen through a vista or arcade formed by the branches of the trees. It is a scene to be felt, not described—a music of the eyes, a melody of the heart, whose truth is known only by its sweetness. Short views of forest glades down the glen are diversified

by the straggling trees that hang upon the declivities. A Cedar of Lebanon in the dell measured 18 feet 3 inches in girth at 3 feet from the ground. It appeared worthy indeed to be the emblem of the majesty of Israel. An Oak larger than its companions measured 15 feet 7 inches in circumference, and the bole to the branches was 20 feet high.

The next object I came to was a pedestal, with the following brief notice—

“ALEXANDER POPE, 1744.”

The next was the crowning-point of all—the Ruined Castle, a masterly deception, standing on the highest ground in the Park, and commanding an extensive prospect on to the Malvern Hills, the Welsh mountains, Woodbury, and splendid home views of the diversified scenery of the park, the dingle, and the pools. Then home by a tablet dedicated to Milton, with the following lines from his “Paradise Lost:—

“These are thy glorious works, Parent of Good!
Almighty! Thine this universal frame,
Thus wondrous fair. Thyself how wondrous then,
Unspeakable! who first above these heavens
To us invisible, or dimly seen
In these thy lowest works; yet these declare
Thy goodness beyond thought, and power divine.”

Geologists tell us that the body of the earth was once in a state of fusion—that is, it was once all in a melted state, glowing, burning, flaming, and that it gradually cooled until it became covered with a hardened surface. This park in the convulsions of Nature seems to have been tossed up into all sorts of forms, and is now clothed with trees, some appearing in full view, others half concealed behind the rising banks, and others with their rounded heads appearing above the summit of one range as if they were clumps of shrubs seated on the sloping banks of the more distant hills. Such extent of ground, such variety in the disposition of it, objects so interesting in themselves and ennobled by their situations, each contrasted to each, every one distinct, and all happily united—the parts so beautiful of a whole so great compose altogether a landscape of some magnificence and of great beauty.

I have seen many landscape paintings where the trees have been grouped in the most picturesque manner, and where the soft green glades have been displayed in a very delightful style to give variety, light, and shade, and where the tone of colouring and all the other accompaniments have been employed by the landscape painter to realise the best creations of the imagination; but I have rarely seen any landscape to compare with the scenes that are produced in this place. These scenes are produced by groups of trees, the Oak, Beech, and Chestnut predominating, disposed, not in the random manner recommended by some landscape gardeners to produce some effect, and to be left as a haphazard attempt at a composition most incongruous, but in a method upon which the mind was employed to picture the future effect from the original arrangement—to see them gradually developing their forms and features with their growth, until they ultimately attain a beautiful landscape, the object pre-conceived from the beginning.

Mr. Loudon, in his “Encyclopædia of Gardening,” describes Hagley, “A square house with raised pavilions at the angles, in a park long celebrated for the beautiful undulations of its surface, the fine scattered groves and thickets of Beech and other trees. As a seat, however, it is deficient in having no pleasure ground or flower-garden scenery near the house. This must naturally lessen the comforts of its possessors in the winter months, who must cross the open park before they can get at gravel paths of any kind.” A person who had never seen the place would naturally conclude from this description that the house was isolated in an open exposed situation. It is true there is no pleasure-ground or flower-garden scenery around the house, but it is naturally sheltered by rising grounds, and the walk of about 50 yards leads to the shrubbery and pleasure grounds. To my taste it is better as it is. You go forth to enjoy the shade and shelter of a short walk through flowers and shrubs, or, if inclination leads you to extend it through woodland scenery in the park, there is the charm of variety to engage your attention; while flower gardens or pleasure grounds seen from the house, being always visible, become monotonous and devoid of interest. The beautiful ground

around the house is varied by gentle swells and graceful slopes; here dipping into easy hollows, and there rising in gradual ascents of moderate height. The varied undulations, and the different shadows and tints of mild colouring thrown across the view by the different inequalities, form of themselves a pleasing picture.

I cannot conclude without returning my grateful acknowledgments to Mr. Mackie, the head gardener, for his hospitality and kindness in accompanying me to all the various scenes in this extensive and beautiful park.—W. KEANE.

ASPARAGUS-BEDS—FRENCH CULTURE.

I do not know if it be permissible to comment on your answers to correspondents, but if so, may I be allowed to make a few remarks on "G. A.'s" answer to "H. N. E.," page 479, No. 194.

I cannot tell what the questions may have been, that were put by "H. N. E.," but presume them to have been elicited by my short paper on the French method of cultivating this esculent in your Number of the 1st of November; but I will confine myself to the remarks of "G. A." He says—"There is no benefit in the French system, unless you wish to have Asparagus with a long, slender, underground shoot, with no more of it eatable than the green or purple tips." Well, I must not be rude, so will merely say, that it appears to me rather a cool assertion, after my description of that grown by L'Hérault, père et fils, a bundle of thirty-six heads of which weighs 14 lbs. I admit that the shoots are long, very long, 14 inches, but with that weight the reverse of slender, I think.

I saw the plants growing, and although I certainly did not measure them, yet I may venture to say that the stems were 1½ inch in diameter above the ground. Is that called slender? "G. A." then goes on to say, "In what way the uncovering of the roots in winter can benefit the plants we cannot perceive." I beg his pardon, he does perceive it, and very clearly, too, which he proves himself, as he says a little further on, "The beds being covered with soil in spring, it is necessary to take a quantity off in autumn, so as to prevent the crowns rotting, as they are liable to do when in a wet soil, and in order that the roots may be better manured." That is it exactly. I could not put it better myself.

Again, he says, "The earthing-up in spring blanches to the length of 9 inches, with the tips just coloured. Such look very nice, but are tasteless, the underground white part being about as tough as the root of an Elm tree." May I ask "G. A." if he has ever been in France, and did he ever eat French Asparagus? Does he know that hundreds of pounds sterling are taken of Englishmen weekly in the "Halles" of Paris, for this vegetable for the London market?

Does he think that Frenchmen, notably the greatest epicures in the world, that Englishmen who can afford to pay 20s. for a bundle of thirty-six heads of Asparagus, would be likely to eat it, if it were as tasteless and tough as an old Elm tree? I can assert, on the contrary, that it is deliciously tender, and full of flavour, green, purple, and white.

I fear "G. A." is one who thinks nothing can be good out of England. I do not particularly object to that, I rather admire a man of good, obstinate prejudices in favour of his own country, as Dr. Johnson liked a good hater.

I could not, perhaps, discuss scientifically this question with "G. A.," but I see the naked fact staring me in the face—the French produce finer Asparagus than we do. We cannot get over that. Let us try, then, and equal them if we cannot surpass them. L'Hérault tells me we shall never do this last, because we have no worn-out vineyards in this country, and that is the soil especially adapted for the growth of Asparagus.—H. S. WATSON, *The Cottage, Old Charlton*.

[It is quite admissible to comment upon anything that appears in our columns, for we have no object but the eliciting of truth. We have seen Asparagus grown in England as large as that named by our correspondent. A bundle was exhibited any three heads of which weighed a pound. It was, as our correspondent describes the French Asparagus, fully a foot in length; but then if 3 or 4 inches of the French Asparagus are eatable, then is it superior to that we saw exhibited of English growth, for of that not more than from 1 to 2 inches were edible, the rest, as "G. A." describes it,

was "as tough as the root of an Elm tree." Soil, no doubt, has much influence over Asparagus, but climate has more. In a warm climate where its progress is more rapid, the white part during early growth is less woody, as for the same reason it is in forced Asparagus.—EDS.]

PEARS FOR THORN STOCKS.

I SHALL feel obliged if you will inform me what varieties of Pears take best on the Thorn. I have an idea that, double-worked, it will be a very good stock in some soils; but so far as my own experiments go, although the fruit seems to be improved in flavour, the trees are short-lived. If I could find a sort that took kindly and grew vigorously I should feel inclined to propagate it freely.—T. G.

[The Vicar of Winkfield and Louise Bonne of Jersey you will find two varieties that make a vigorous growth on the Hawthorn. That some varieties are not short-lived when grown on that stock we have sufficient evidence, for we know a tree of the Styrian nearly thirty years old which is now perfectly healthy, and bears an abundance of fruit annually. This is a subject we should like to see carried out more fully than it has hitherto been by fruit-growers.]

BIRMINGHAM FRUIT SHOW.

IN your last week's impression appeared a well-written paper by Mr. W. Miller, which in my opinion was indeed a word in season. I attended the above Exhibition, and looked carefully through the different classes, and I was quite as much surprised as Mr. Miller seems to have been at the way in which many things were managed. In the first place, the first prize for twelve varieties of kitchen Apples was awarded to Mr. C. J. Perry, one of the Honorary Secretaries. This collection should have been disqualified, not but that it was undoubtedly the finest collection, but it consisted of only eleven varieties, two dishes containing Blenheim Orange—one dish exhibited under the above name, and the other under the name of Blenheim Pippin, which every gardener knows to be one and the same variety.

In the second place, the gentlemen's gardeners who exhibited at this Show are not likely to exhibit again unless under very different conditions; for one well-known fruit-cultivator told me that it was the first and last time he should think of exhibiting on any such terms. If it is foreign fruit that is wished for by the managers of the above Society, why not have a collection limited to such, and also a collection of English-grown fruit for English gardeners to exhibit, and of which they might be justly proud, instead of inviting them to be at the expense of conveying their own productions to and from an exhibition, without the slightest chance of success, against Channel Islands' fruit? It is not to be expected that gentlemen's gardeners with their numerous and never-ending duties, if they even wished so to do, could find time to tear about the country like a commercial traveller to hunt up the finest dishes of different examples they might meet with, much less could they visit the Channel Islands.

In the third place, the twelve first and four second-prize cards placed in front of the Hon. Secretary's winning collections contained the following words:—"First or second prize (as the case might be), to C. J. Perry, Esq.;" but then followed, "Gardener, Thomas Pointon." This last part at least must be a delusion, for what could this Thomas Pointon know about the greater part of his master's winning-dishes of fruit? Nothing more than, perhaps, the unpacking thereof. What care or pains had this gardener bestowed on their production that his name should so figure? How often had he rolled down the tiffany to protect the blossoms in the spring? or later in the season carefully thinned the fruit? or, later still, protected it against and watched for wasps and other pests? There were exhibitors at this Exhibition who had bestowed all due care upon their productions; but how did they stand? Why, by the side of this fine foreign fruit they were many lengths behind. It may be said they were not obliged to exhibit. Certainly not; but why send invitations round, and so get together some good growers with good English productions, to find

themselves cut out altogether by fruit grown in a more genial clime, and purchased, begged, or borrowed purposely for this Exhibition—and by whom? Why by one of the Honorary Secretaries.

The Pears and Apples from Jersey were certainly very fine indeed, but it is out of all reason for them to come into competition with English-grown fruit; and therefore, as I said before, it shows the absolute necessity of distinct classes for all foreign fruits, if any satisfaction is to be given.

Lastly, I agree with Mr. Miller in thinking that a thoroughly healthy horticultural society is much wanted in Birmingham; but at the same time I trust the next schedule of a fruit show that may be issued, will be one that will not only tempt but repay thoroughly good fruit-cultivators to put in an appearance, so that really fine English fruit may meet with its deserts, and not all the principal prizes go to foreign fruit-jobbers.—W. H. TEEEN.

WINTERING PLANTS WITHOUT ARTIFICIAL HEAT.

IN your Number of December 13th, there is an inquiry from a "YOUNG GARDENER" as to the best method of preserving his bedding plants during the winter in an unheated greenhouse. This is a difficulty that must have forced itself upon the attention of gardeners over and over again, especially of late years when so large a stock of bedding plants is required.

Professor Piazzi Smyth informs us that from careful observations carried on for many years at the Royal Observatory at Edinburgh, it is found that the mean semi-annual variation of heat amounts at the surface of the ground to 50° Fah.; at 3 inches under the surface 30°; at 3 feet 16°; at 6 feet 10°; at 12 feet 5°; at 24 feet 1°.

Thus we see that at a depth of only 6 feet, the mean variation is five times less than at the surface of the ground. I cannot, therefore, help thinking that the knowledge of these facts might lead gardeners to a solution of their difficulty. Let the house intended for the preservation of plants during the winter be sunk 6 or 8 feet below the surface of the ground, and you may do away with fires, and pipes, and charcoal, with their disagreeable accompaniments of coal and smoke and ashes, to say nothing of the expense, and constant attention and anxiety which attend them.

As regards light, the glass roof would be the same as now. For ventilation, air might be admitted to the bottom by means of a pipe, similar to the wind-sails for admitting air to the holds of ships, with two or three ventilators or apertures at the top of the structure; and the necessary drainage could be easily effected.

It also appears to me that the present sloping stages with the plants in pots exposed to the air on all sides, are very unsuitable for preserving them during the winter. Would not horizontal stages be better? the plants being placed in boxes somewhat larger than Mignonette boxes; and two or three of these horizontal stages might be arranged one over the other, thus accommodating a greater number of plants. The lower stage would not have much light, but that is not of vital importance with the present object.

If additional security against frost were required, a baize cloth might be stretched when necessary at the top of the house, from back to front, about 1 foot beneath the glass. I have made the above remarks merely by way of suggestions.—ISLE OF WIGHT.

LATE MELONS.

I SEE in your report of the Fruit Committee of the Horticultural Society that a Melon was exhibited by Mr. Short, gardener at Clewer Park, Windsor, of excellent quality for so late in the season. I cannot but congratulate Mr. Short on such a decided success. A late Melon cannot be otherwise than a decided acquisition where much fruit is in demand, more especially when it is required to be of good flavour. Some time ago I communicated an article to your pages pointing out the desirability of a good late Melon, as I then considered such possible, and I am glad such results are already accomplished. When gardener at Crom Castle

in Ireland, Mr. Short kindly forwarded me a few seeds of a Melon called "Graham's." I changed my abode before the Melon was ready for table, but I understand from my successor that "Graham's" Melon is a first-rate kind as regards flavour, being the best by far amongst a good many other kinds. Mr. Short appears to possess some really good kinds, which I hope he will enable other cultivators to obtain.—JOHN EDLINGTON, *Wrotham Park, Barnet.*

PROTECTING BUDS FROM BIRDS.

I WAS much struck the other day while walking round the grounds of my neighbour, Mr. Rivers, with two rows of Plum trees, large pyramids from 12 to 14 feet high, and nearly as many years old, all apparently surrounded by a network of lace, which in the bright sunshine was quite dazzling, owing to the heavy coat of rime on each thread. I found on inquiry that the buds of these Plum trees were in such high favour with the sparrows and bullfinches, that they usually stripped the trees during the winter, not attacking trees of other sorts growing near them, the buds of the sort in question, the Reine Claude de Bavay Plum, being apparently their favourite food. On examining the trees I found the apparent network formed by white worsted carried round the outside shoots of each tree, with a twist round the ends of several twigs to make it hold fast. It thus formed a net with meshes from 1½ to 2 feet in diameter. I was assured that this was an old custom, but a sure preventive to the vexatious depredations of bud-eating birds. I observed, also, on the lawn some large bushes of the May Duke Cherry, the buds of which are such especial favourites with bullfinches, protected by white worsted, and not a bud was touched. The cost and trouble were not heavy, 2½ lbs. of worsted and two boys with a short ladder netted one hundred large Plum trees in two days.—PRUNUS.

WHITE ISCHIA FIG—CANARY AND HONEY PEACHES.

IN reply to "R. F.'s" inquiry (page 439) regarding the White Ischia Fig, I cultivated it many years in a house without heat, but never obtained anything more than a stray specimen of fruit. This was, of course, fruit of the first crop. Upon making inquiries of a Fig amateur who had lived in Italy, I was informed that the White Ischia was equally loth to give a first crop in its native land, so I put my plant into a heated house, and now obtain an abundant second or autumnal crop. Its flavour is so peculiar and so excellent, that I have increased my stock, and tried one tree in the border of the house, but the fruit was no larger than from pots. The compact growth of this variety makes it very desirable where space is scarce.

In page 430 of your Journal Mr. Bréhaut appears to say that a Canary Peach ripened in his orchard-house on the 11th July. Surely, if this is not a misprint, the house must have been heated. The Honey Peach, to which he also refers, is a most singular fruit. In taste it is very sweet; but the shape is so like a swollen almond that it is possible that the Peaches described by the ancient Romans may have been nearly allied to this variety.—S. B.

NEW BOOK.

The Cottager's Garden Guide. Edinburgh: Andrew Elliot. London: Hamilton, Adams & Co.

WE believe that it is no secret, and we are sure that it ought not to be, that this excellent little threepenny book was prepared by Mr. Cunningham, a writer to the signet, and landed proprietor in Scotland. He had observed, as all must have observed who have travelled among highland and lowland cottiers, that they, as a rule, neglect gardening. There are many notable exceptions to be met with, but generally the Scotch cottager neglects his garden. This, at the first thought, seems the more surprising, because gardeners are one of the three great exports of Scotland, doctors and black cattle being the other two; but if we inquire we find that the gardeners by profession are not

usually the offspring of Scotland's cottagers, they are, for the most part the sons of a higher class.

Be the reason what it may, the fact is patent that Scotch cottagers neglect gardening, and to rouse them and to guide them from this injurious neglect is the object of the work before us. "They will find," says the introductory note, "by paying a little attention to the subject, that it is quite within their power to obtain either some addition to the comforts of their own firesides, or a little money from the sale of the produce."

"This small publication may also, perhaps, prove useful to parents who desire to give their children a taste for flowers, and to encourage them in the innocent pleasure of rearing their own plants."

"The object has been to give practical information, so that any one may easily find out what to put in his garden, the quantity and price of seeds required, and how common vegetables ought to be cooked."

Such are the writer's praiseworthy, disinterested objects, and without any reserve we say that whoever follows the instructions he gives, will not fail to attain them. Let us add, that although Mr. Cunningham gives the instructions, and is well capable of giving them, yet with the good spirit of one who not only wishes to be of service, but is anxious to adopt the surest mode of conferring the benefit, he has had the pages of his little book revised by some of the ablest gardeners, and other good authorities.

We commend the work to our readers; and those of them who wish to distribute such a guide among cottagers not yet attracted to gardening, or who need more information, may obtain the book at the reduced price of 2s. per dozen.

PRODUCE FROM AN ORCHARD-HOUSE.

SEEMING a wish expressed by one of your correspondents, that cultivators of orchard-house trees would furnish a statement of the quantity or size of various fruits under their superintendence, I enclose mine, hoping you may think it likely to prove interesting to your readers.

I have two small houses, one 15½ feet by 12, the other 18 feet by 8½, and in them about eighty trees of various descriptions. The Peaches, Nectarines, and some of the Plums are kept under glass the whole season. The Pears, Apples, and the remainder of the Plums are placed out of doors about the 25th of June, the pots being plunged half their depth in the soil. Size of the pots 12's, 8's, and 6's.

The Peaches and Nectarines were over-cropped, one having forty left on it, when prudence said twenty would have been a good crop, consequently they were rather small, but the flavour was generally good. The Pitmaston Orange Nectarine bore a large crop of excellent flavour and size. As regards Plums, Coe's Golden Drop bore a good crop, flavour delicious; Jefferson, two years in pots, bore forty-six fruit of the usual size; Pond's Seedling, thirty fruit, beautifully coloured, six weighing 18 ozs., or rather more than 2 ozs. each.

APPLES (beautifully coloured).—Brandy Apple, 7½ inches circumference; Mela Carla, 11 inches; Melon Apple, 12½ inches; Reinette du Canada, 13½ inches.

PEARS.—Beurré d'Esperen, 7½ inches by 7½; Beurré d'Arenberg, 9 inches by 8; Joséphine de Malines, 8½ inches; by 8½; Winter Nelis, 9½ inches by 10; Beurré Diel, 7½ inches by 11. The flavour of those which have ripened has been delicious.—W. H. T., *Sawbridgeworth, Herts.*

P.S.—Mr. Rivers saw the above Apples and Pears growing, and pronounced them first-class fruit.

CULTURE OF LEOPARD'S BANE.

OWING to the machinery being out of repair at a woollen mill, a number of young women were for a time thrown out of employment. Having nothing to do they took a ramble into the country. One of them bent on gathering wild flowers rambled into a wood, where, in a boggy place near a stream, she gathered a handful of the flowers of *Doronicum pardalianches* (Leopard's Bane). Pleased with them she showed them to her partners, who on their return gathered handfuls of the flowers. They were shown to the operatives at the mill, the flowers were new to them; having

cottage gardens at home, they inquired where the wild plants grew, and went and gathered roots which they planted at home. They grew, and next season flowered abundantly. The cottagers were pleased with the flowers, and distributed roots among their neighbours and friends. The Leopard's Bane is now a common plant, and is one of the cottager's favourites. It is easily propagated by dividing the roots, which are composed of several knobs connected by long fibres. The best spot to grow it is a damp soil, there it will flower for a long time. The flowers come at the end of the branches, are overtopped by succeeding ones, and are of a bright yellow colour.

With us it is a rare wild plant, and if the herbalists collect the leaves as eagerly as they have done in the last season, it will not be long before it is exterminated.—RUSTIC ROMAN.

THE MATURING OF FRUITS.

I SHALL be glad of some information relative to the maturing of fruits, particularly the later sorts of Pears. I think there is much yet to be learnt of their proper treatment, which treatment, perhaps, ought in some measure to vary with each sort, if this were practicable.

Take, for instance, the Beurré de Capiaumont. Mr. Rivers classes it among the stewing Pears, whereas with me if not allowed to hang too long on the tree, and so soon as gathered put into a room where the temperature never or seldom falls below 60° Fahr., it is in about a fortnight or three weeks one mass of juice, and of very high flavour, but, unfortunately, it does not keep after this stage is reached more than a day or two.

So with the Marie Louise, the Beurré de Rance, and some others, although I prolong their season by keeping them in a cold room, I never develop their flavour as I do when kept warmer. In fact, in the case of Beurré de Capiaumont, if I keep it cool a fortnight after gathering it never becomes melting.—T. G.

PROFITS OF A VINERY.

HAVING noticed discussions on orchard-houses in your Journal for some time, I thought an account of a house under my care might interest some of your readers.

When I came to this place (Manor House, Ashton-on-Mersey), an orchard-house was about to be erected. It is 60 feet by 20, but 6 feet are taken off for the boiler and potting-shed. Air is given at the sides and top, in a similar manner to the one at Great Marlow. It has a double row of four-inch piping, flow and return, along each side and one end; but as the lady I have the honour to serve wanted flowers, the internal arrangements were altered. A partition was put across the centre, making each part 27 feet long. The front was filled with stands suitable for plants, the other portion with bedding plants. Ten Vines were planted on each side; they were planted inside, and the roots allowed to run out. In the hot summer of 1859 they made excellent growth, and in 1860 they were allowed to carry two bunches each. In 1861 they carried six bunches each. In 1862 we began selling the Grapes, realising £40, and in 1863 we made £51 13s. 6d. We have just done cutting Grapes, and I find we have made this year £61 19s. 10d. If the account from Great Marlow be a fair calculation, I think Vines would be most profitable, besides the advantage of growing plants underneath them.—S. RYDER.

[Our correspondent calls the structure an orchard-house, but it is a heated vinery. He does not say when he begins forcing, nor how early the Grapes were ripe.—EDS.]

RETINOSPORA OBTUSA.

I OBTAINED a few small plants of this Japan tree about a year ago, and being uncertain whether they would prove perfectly hardy or not I planted them in a cold pit. In the severe weather of last January I stuck a few laurel boughs amongst them and over them, and they escaped without the least injury. In fact, I think they would not have suffered if they had been perfectly exposed. It is not, however, to their hardiness but to another circumstance that I wish to direct attention. Since the summer growth has perfected

itself, or even before then, the plants have become of a pretty golden yellow, quite as much so as *Thuja aurea* in its best state in spring or early summer, and the appearance is certainly more handsome than the Golden Yew is at any time. I now ask if this is the usual character of the species, and if not, whether this feature is likely to become permanent? If so, the tree will be a great acquisition to our shrubberies and elsewhere.

I may add, that *Retinospora pisifera* is growing by the side of the plant above mentioned, but shows no symptoms of turning yellow; and one plant of *R. obtusa* also retains its green colour. The soil they are growing in is a sandy one, such as is occasionally used for cuttings, and plants only partially rooted. I do not perceive any disposition on the part of other plants in the pit to change colour, there being some of *Cupressus*, *Juniperus*, *Wellingtonia*, &c., and to the best of my memory the plants of *Retinospora* here alluded to showed no symptoms of turning yellow at the time they were planted, which was at the end of October. If others of your readers have plants of *Retinosporas* that have changed in like manner, they may, perhaps, be able to throw some light on the matter.—J. ROBSON.

ENTOMOLOGICAL SOCIETY'S MEETING.

THE Entomological Society's meeting for December was held on the 5th inst., the President, F. Pascoe, Esq., F.L.S., being in the chair. A numerous collection of entomological publications presented to or purchased by the Society since the last meeting were laid on the table, including Dr. Haagen's recently published memoirs on the invertebrate animals of Prussia and on the Odonata of the Holy Land; MM. Saussure & Sichel's new work on the Scolidæ, Dr. Candèze on new Elateridæ, the Baron Lelys Longchamps on Agrionides, &c.

Mr. Jenner Weir exhibited a series of carefully prepared microscopical slides containing specimens of the spiral tongues of numerous species of British Butterflies, and exhibiting great variation in the striation of these organs, and in the form, arrangement, and number of the minute papillæ at their extremity. Even in closely allied species, as *Vanessa C. album* and *Io*, these variations were found to be very strong.

Mr. Frederick Bond exhibited a photograph of a strange variety of the common Magpie Moth, *Abraxis grossulariata*, the fore wings of which were nearly suffused with black markings; also a drawing of the larva of *Acronycta strigosa*.

The Rev. Hamlet Clark exhibited a collection of minute Beetles collected in Egypt by the Rev. P. Cambridge, as well as a number of Ants of different species collected in Syria by Mr. Lowne.

Mr. F. Smith exhibited, on the part of Mr. Stone of Brighton, a remarkable Wasps' nest, variegated in the colours of its outer covering, having been formed jointly by two distinct colonies of *Vespa vulgaris* and *V. germanica*, one of which was placed in a box in a bedroom window, and the other in the window immediately beneath it; and Mr. Stone observed that when any individual of the upper colony flew low on returning home, it mistook the nest and entered the lower one instead of its own, and thus a different colour was caused from the two species differing in the nature of the wood of which the covering was made, one species selecting hard sound wood, and the other such as was decayed. Mr. Stone also exhibited the larvæ of *Ripiphorus*, parasitic in Wasps' nests, one of which still remained attached to the body of its victim, the grub of the Wasp.

Mr. W. F. Evans exhibited a number of specimens of a small green species of Cockchafer (*Pyronota æstiva*), from New Zealand wool, in some bales of which thousands of specimens could have been procured. It was supposed that in flying about the sheep they had become entangled in the fleece.

The President exhibited some small globular nests of a species of Spider from South Australia, collected by Mr. Audubon, closely resembling the seeds of *Lophospermum*, the Tea plant of Australia, whilst the Spiders themselves resembled small lumps of birds' excrements; and as they kept watch near the nests, insects on which they fed were easily deceived.

Mr. Stevens exhibited a number of insects forwarded from

tropical Western Africa, Fernand-van River, by M. Du Chaillu. He also read a letter from the same gentleman, stating that he had dispatched a living Gorilla to Europe; but it had unfortunately been killed in the boat which was conveying it to the vessel, in which it got loose. Mr. Stevens also exhibited some specimens of the rare African Beetle *Cheirobasia Barkei*, one of the males of which was remarkable as wanting the brush of hairs on the fore tarsi, which is one of the distinguishing characters of the male of this species. These insects had been sent by Mr. Layard from South Africa.

Mr. Hewitson sent a monograph of the genus *Ypthemia* belonging to the Satyroid Butterflies, together with descriptions and figures of two new allied genera.

Mr. Kirby read some notes on the synonymy of various British species of Butterflies, insisting that their names required changing by the rule of priority in favour of other names bestowed on them by previous writers.

Mr. F. Moore exhibited an extensive series of silk and silk-producing insects; and communicated the completion of Captain Hutton's remarkable Memoir on the reversion and restoration of the Silkworm in India, containing descriptions and figures of the caterpillars of various kinds of Silkworms cultivated in that country.

PORTRAITS OF PLANTS, FLOWERS, AND FRUITS.

ACMENA FLORIBUNDA (Copious-flowered *Acmena*).—*Nat. ord.*, Myrtaceæ. *Linn.*, Icosandria Monogynia. Native of New South Wales. Flowers inconspicuous, but its clusters of bright purple berries are very showy. Tree 20 feet high, like a gigantic large-leaved Myrtle, would be highly ornamental in the conservatory.—(*Botanical Mag.*, t. 5480.)

ARAUJA ANGUSTIFOLIA (Narrow-leaved *Arauja*).—*Nat. ord.*, Asclepiadaceæ. *Linn.*, Gynandria Pentandria. Native of the forests of Uruguay. Stove climber with yellowish white, not conspicuous flowers.—(*Ibid.*, t. 5481.)

DENDROBIUM JAPONICUM (Japanese *Dendrobium*).—*Nat. ord.*, Orchidaceæ. *Linn.*, Gynandria Monandria. Common in Japan. Flowers white, not showy.—(*Ibid.*, t. 5482.)

BARTONIA NUDA (Naked (Bractless) *Bartonia*).—*Nat. ord.*, Loasaceæ. *Linn.*, Icosandria Monogynia. Native of Missouri, introduced by Mr. Thompson, of Ipswich. Flowers yellow, but, as Mr. Thompson fairly points out, "It cannot be looked upon as a hardy ornamental plant, the flowering taking place only late in the evening, and at a season (October), when it is too late for the ripening of the seeds."—(*Ibid.*, t. 5483.)

VERONICA HULKEANA (Hulke's New Zealand Speedwell).—*Nat. ord.*, Scrophulariaceæ. *Linn.*, Diandria Monogynia. "Quite a new form of *Veronica*." Native of the mountains in the middle island of New Zealand. In a cool greenhouse it flowered in May, but from growing at 2000 feet elevation in its native island, it may be expected to be hardy here. Flowers lilac, and in a thyrses like those of the common Lilac shrub.—(*Ibid.*, t. 5484.)

EPISTAPHIUM WILLIAMSII (Mr. Williams's *Epistephium*).—*Nat. ord.*, Orchidaceæ. *Linn.*, Gynandria Monogynia. Native of tropical South America. Flowers of a fine, light, red-purple colour.—(*Ibid.*, t. 5485.)

SAXIFRAGA FORTUNEI.—One of the numerous variegated plants of Japan. The leaves are of the dark green usual in the genus, but variously blotched on the upper surface with white and pink.—(*Floral Mag.*, pl. 221.)

GLADIOLUS, ELEANOR NORMAN.—Raised by Mr. Standish, Royal Nursery, Ascot. Flowers white tinged with pink, and flaked with dark pink stripes.—(*Ibid.*, pl. 222.)

DISA GRANDIFLORA var. **SUPERBA**.—We noticed this recently in Messrs. Warner and Williams's "Orchidaceous Plants."—(*Ibid.*, pl. 223.)

PENTSTEMON.—*Princess of Wales*, white, with lips broadly bordered with pink. *Attraction*, white, tinged with pink. Both raised by Mr. Salter, Versailles Nursery, Hammer-smith.—(*Ibid.*, pl. 224.)

CLEMATIS RUBRO-VIOLEACEA.—Raised by Mr. G. Jackman, Woking, by crossing *C. lanuginosa* with *C. viticella*. It is quite hardy, and, as its name indicates, the colour of the flowers is reddish purple.—(*Florist and Pomologist*, iii., 265.)

FOUNTAINS AND ROCKWORK AT DINORBEN HOUSE.

THESE, which we noticed at page 436, were executed in terra cotta by Mr. James Pulham, Broxbourne, Herts, in the year 1859.

The fountain called the Hebe is represented in our engraving; it is 20 feet high, and is in the centre of a four-lobed basin 42 feet in its widest diameter. The whole cost £280. The material of which it is formed is terra cotta of the colour of Caen stone, and is said to be very durable, which might be expected from its being burned until semi-vitrified. The water of the fountain, from the jug held by Hebe, flows into a cup held in her other hand; but it also rises from the nostrils of four dolphins, and from the upper basin falls into the lower one. Round the latter is an outer basin 3 feet wide, for plants. A similar Hebe fountain has been sent to Bombay by Mr. Pulham, to be fixed in the grounds of Sir Jameset Jeegebhoy.

It is ornamental, even when the water is not flowing, which cannot be said of all fountains.

TRENTHAM BLACK GRAPE.

RESPONDING to your request in the JOURNAL OF HORTICULTURE at page 410, I beg to state that I obtained a plant of the Trentham Black Grape direct from Mr. Fleming as soon as it was distributed, which I think was in the year 1858. I was induced to get it through the recommendation of a friend of mine (now deceased) who had just visited Trentham, and had there seen it fruiting remarkably freely in pots. So fine were the bunches, and such the number produced on comparatively small Vines, that he thought it would prove the most useful and prolific Grape for pot culture that he had ever seen. Being myself fond of the cultivation of Vines in pots, I immediately set about propagating it from all the laterals I could command, and by the autumn I succeeded in obtaining several strong canes fit for fruiting in the ensuing season. These were duly started the following spring, and I naturally anticipated a fine crop of Grapes, but to my surprise such was not the case; for, instead of bunches, I had claspers in almost every case, the isolated bunch or two produced being also of a very inferior character com-

pared with what I had been led to expect. I, however, resolved to try it another year, and at the same time to send an eye or two to a friend of mine, who is a first-class grower of pot Grapes, to see if he would meet with any more certain success than I had done. However, in the following spring I received a note to the effect that

Trentham Black had proved a failure with him, as well as myself, and that he considered it a shy bearer, and consequently an unsuitable variety for pot culture.

So much for its unsuitability for pot culture. I will now endeavour to state its adaptability for vinery cultivation. The original Vine was planted out in the June of the same year in which we received it into an inside border of a cool vinery, where the Grapes are generally ripe by the first week in September. It was allowed to grow vigorously for a couple of years, and the third year we hoped to have taken a few bunches from it; but strange to say, although an unusually strong well-ripened cane, it showed but two or three bunches, and these were small and puny. The next year, however, the result was gratifying, and for the last two or three years it has borne magnificent bunches, with a profuse bloom of an intense purplish black colour, and a most delicious flavour, being more juicy and rich than the Black Hamburgs in the same house, and it has in every way proved itself a most desirable (and with my employer a favourite) variety. I have observed that it retains its leaves in a healthy green state much longer than any other variety growing in the same house, which would naturally lead one to suppose that the bunches would hang much longer than on the other varieties having less vitality. This, however, is not the case with us, for we find the berries invariably mould and decay earlier than the Black Hamburgs in the same structure. This circumstance arises probably from the berries containing a larger quantity of those juices which tend to hasten decay.

From the above facts I am led to infer that this variety is not a desirable one for pot cultivation; but when grown in a cool or warm vinery, and closely pruned, it cannot fail to give universal satisfaction. For an orchard-house, regulated as Mr. Pearson advises or teaches in his very sensibly written book on orchard-houses, I have not the slightest hesitation in recommending it as a suitable variety.—HENRY MUNRO, *Cleaveland, Lyme Regis, Dorset.*



HEBE FOUNTAIN.

WORK FOR THE WEEK.

KITCHEN GARDEN.

THE weather must now decide the operations to be performed in the kitchen garden. If frosty all manures ought to be wheeled to where they are wanted. If the *Asparagus* beds are not soiled up for the winter, no time should be lost in getting it done. In open weather trench or dig all vacant spaces; trenching is a prospective operation, therefore the bottom ought to be manured well, as by that process land will remain in heart three or four years, and after that time a second trenching will bring up the soil from beneath. *Brussels Sprouts*, when gathering do not cut out the crowns until spring. Some do so in the hope of inducing them to throw out more sprouts, but we think it injurious at this season, as it admits moisture, which in the event of severe frost, proves fatal to the whole stem. *Cauliflowers*, stir the surface of the soil amongst the plants under hand-lights, and sprinkle some charcoal dust or wood ashes amongst them; it will sweeten the surface of the soil, and prevent the green growth over it, which stagnant air is apt to produce. For land that has been long cropped with vegetables, a dressing of fresh loam would in many cases be preferable to manure, and where this is wanted, and can be obtained, it should be at hand, in order that advantage may be taken of frosty days for wheeling it upon the ground. Where fresh soil cannot be obtained, charred vegetable refuse, such as prunings of shrubberies, edgings of walks, and many things which turn up in course of the season, may be cheaply made to form an excellent manure.

FRUIT GARDEN.

Figs against walls will require some protecting material placed over them in the midland and northern counties. When the frost sets in lay a coat of manure—say 3 inches thick around the Gooseberry and Currant bushes. Continue to prune and nail wall trees; however judicious the system of summer management, many small bits will require removing before nailing, if the trees are to be kept handsome. We are also alive to the great importance of having a just equilibrium betwixt roots and branches, and in rich garden soil this can only be attained by lifting the trees every two or three years or by root-pruning.

FLOWER GARDEN.

Many persons object strongly to planting shrubs or trees in winter, believing that the roots if hurt at this season are liable to rot, and certainly early in autumn is a much preferable season; but with favourable weather we would not delay such work a single day, and if the soil is properly prepared by draining, &c., where necessary, as should always be done before planting, there will probably be fewer failures from planting now than if the work were delayed till March. But where the garden is of a clayey nature, and in an unkind state at present, it will be better to defer planting until spring. Where *Rhododendrons* are grown in masses, and exhibit any indications of having exhausted the soil, a top-dressing of rotten cowdung 3 inches deep, and extending as far as the roots, should be applied at once. This will strengthen the plants for flowering, prevent rapid evaporation in summer, and keep the ground cool and moist, which is essential to the well-being of this handsome tribe of plants.

GREENHOUSE AND CONSERVATORY.

The changeable weather which we are now experiencing will render it necessary to carefully attend to specimen hardwooded plants which have to be wintered in these houses. Many of these are impatient of heat and a confined atmosphere. Use no more artificial warmth, therefore, than is absolutely necessary, and endeavour to counteract its drying effects, either by means of evaporating-pans, or by sprinkling the paths or borders, &c., in order to prevent anything like a dry parched state of the atmosphere.

STOVE.

If there is any prospect of a scarcity of plants in flower next spring, a portion of the *Gloxinias* and *Achimenes* which have been the longest at rest may be started at once, as also a few *Clerodendrons*. The latter should be cut back to the lowest eyes so as to secure bushy specimens, with the pots covered with foliage, and when the plants have fairly

started into growth the balls should be reduced sufficiently to allow of giving a good shift in fresh soil without increasing the size of the pots. A few of the *Allamandas* may also be pruned and placed in heat, provided the wood is well ripened. A plant or two of *Echites splendens* and *Dipladenia crassinoda* may also be started. Let *Ixoras* and all other hardwooded plants that have made sufficient growth be kept rather dry at the roots in order to check their growth, and induce a tendency to form bloom-buds, but do not let the soil in the pots become so dry as to affect the foliage.

FORCING-PIT.

This structure will now be kept in full activity to supply the various calls for plants in bloom, which at this season of the year are more or less in demand in most establishments. Care should be taken before plants are moved to sitting-rooms to gradually harden them for a day or two, either by placing them in the conservatory or an intermediate house. Dutch bulbs should be largely used for present forcing. Do not forget to introduce a good batch of *Roses*, choosing the most promising plants of *Teas*, *Bourbons*, and *Hybrid Perpetuals*, which are the best kinds for winter flowering. Next to *Camellias*, *Azaleas* are, perhaps, the most showy plants that can be had in bloom at this season, and where there is a good stock of these to draw from, some of the most forward plants of the common varieties should be placed in heat at once, moistening them overhead two or three times a-day; but unless the plants have set their flower-buds early in the season, they can hardly be expected to flower so freely or finely as under more natural circumstances in the spring.

PITS AND FRAMES.

The inmates of these structures will require but little water for some time, and the little that may be necessary should be given early in the morning of a fine day, when air can be given to dry up the atmosphere before night. Also, guard against the ill effects of damp by giving air whenever it can be done without risk, but do not expose the stock to cold north, or north-easterly winds, which seldom fail to turn the foliage brown and rusty.—W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

THE frost came as was anticipated, 5 10, 15, and more degrees, but with an inch of snow that protected things very much, which was a great advantage after the warm muggy weather had kept plants growing without enough of sun to consolidate that growth. An inch of snow is a matter of importance in such cases. We can offer no better protector. Every flake as it falls on another flake shuts in so much air, and that air so shut in becomes a nonconductor.

Our chief care as to vegetables was confined to Cauliflower, Celery, and Lettuces. The Celery we banked up with stubble, placing a little all over the ridge of the bed, between the plants and over the plants; all the rest will now remain for the season, except what is over the plants, which will be removed that the tops may have sun and air, and may with a few branches of spruce and other evergreens be replaced on a frosty night; and the current of wind and the slight freezing would seem to say we shall not be long without it. These changeable days, ranging so soon from 40° to 26° or lower, render much more care and attention necessary. The Cauliflower under hand-lights was covered over with litter after the soil inside was crusted, and the leaves hard. We thought we were in for a fortnight's frost, or we would not have waited so long. We knew that the frost allowed would do no harm, and after a slight freezing, the plants being in a state of rest, we knew they would take no harm if shut up for a fortnight, a month, or even two months. We once had Cauliflowers shut up thus for ten weeks, and we never had earlier or better Cauliflower. The temperature for all that time must have been from 28° to 32° under the covering. Had it been from 40° to 45° we should have expected to have seen a sickly blanched vegetation. As it was, the covering remained on for twenty-four hours after the thaw set in, and the Cauliflowers being

thawed gradually looked as well as if they had been shut up for one night only. They were just as fresh as a lawn would be that had fallen to a temperature of about 31° before it was covered by a foot of snow for six weeks. As soon as the snow went the lawn looked more healthy and green than it did before the snow came. Cauliflowers and Lettuces for use were protected before they were much, if at all, frosted. In their case the less they are touched the better, and they should not be long covered up continuously unless the temperature is very low, close on freezing.

As to the *protecting materials* to be used in a hurry, mats are as good as any, but then a single or a double mat is of little use in a severe frost, in a cold pit. A little rough hay is a grand thing for protection, as it lays open, and can also be pressed a little close. Straw is also good, and the less broken it is the better if you can cover with something closer at the surface. Rough stubble is also a good protection for many things, and chiefly because it is open, and allows the air to penetrate and circulate. We protected a lot of glass in a cold pit with it alone the first cold night, and our superintendent of protecting told us he thought it was of little use for a severe frost. That depends entirely on how it is treated. Of itself it would not be sufficient to keep out our most severe frost without very frequent turning, as its very looseness and roughness would allow lines of radiation to reach from the glass to the sky, and thus the frost would enter. But supposing that 6 inches of this loose rough stubble were placed over the glass, and 2 or 3 inches of tree leaves, as we used, or half as much of soft rough hay were placed over the stubble, it would require a very severe frost to penetrate beneath the glass. The very openness of the stubble, a drawback if used alone, became a great advantage when joined with the closer material at the surface. Not only would every straw of the rough stubble serve to prevent radiation, but the closeish material at the surface would make the whole body of stubble beneath a non-conductor. We were not over-well provided with protecting material; but though we had a great number of tender plants in cold and earth pits, the stubble, branches, &c., and some 1 or 2 inches of tree leaves on the top of everything made all quite safe, so that we have not lost a plant.

Those who would take a lesson in protecting should, in a severe frost, examine the state of the ground under long grass, moss, or even a slight covering of tree leaves. We have often been surprised to find how thoroughly Nature accomplishes her objects with the slightest materials. Hints from our pastures and woodlands are often as valuable as hints from books. We have had several letters, in spite of the standing protest of our conductors, about our old friend who took all his bedclothing to save his Apricots and Peaches. It is often important to know what to do in an emergency, and therefore we will mention how another friend, now gone, saved thousands of pots of Mignonette, when almost every neighbour lost them, though we have alluded to the matter previously. The frost came so suddenly that much litter for protection had not been procured. A mat was put over the glass, and a thin covering of litter over it. The frost was so severe as soon to penetrate beyond the mat; but its intensity was rendered harmless by a constant shaking and turning of the litter over the mat. Our old friend and his man Friday worked as hard as they could, one at the front and another at the back of the frames and pits, in turning this litter the whole night, beginning at one end, again, as soon as they reached the other. Every time the litter was shaken and turned it presented a fresh surface to the action of radiation and conduction, and Mr. Frost had to begin his work afresh. We have saved many plants by having the surface of the covering broken before daylight, as just before the dawn is generally the time when the frost is most intense. We have had several private complaints that we did not tell how to save the plants from the coming frost, and we suppose it will be best to plead guilty of not knowing the future; but sure we are that all amateurs will receive a helping hand from their neighbours, and, if wise, they will use the experience of being caught napping as a good reason why they will never be found so unprepared again.

Fruit garden very much the same as in previous weeks.

Looked over Grapes. Gave enough of heat to keep the frost from them, more especially as the most of the foliage was removed. Looked after Strawberries, examined fruit stores, and washed and cleaned second vinery, much as was stated as respects the first.

Vines.—We have put in a few eyes, in case we may want them. Those who intend forcing Vines in pots should commence as soon as this sees printer's ink. Young plants are best for this purpose, supposing that a good crop is taken from each plant, and the plants are then thrown away. When the plants are kept on from year to year, a very moderate crop must be taken yearly. We have had from eight to sixteen and twenty good bunches from plants fifteen, sixteen, and seventeen months from the bud-cutting. To expect future crops from such plants would be useless. On the whole, where means are at command, and a fine show a feature, we prefer taking only one crop from the plants. For this purpose the single buds, with three-quarters of an inch at each end of the bud, should be inserted singly in the smallest pots by the first week in January, be placed in a moderate hotbed for a fortnight, and then in a nice sweet hotbed with a temperature of 85° bottom heat, and 60° or 70° top heat. Here the little pots will soon be filled with roots before the bud has made much top growth, and should then be shifted into a larger—say a four-inch pot, using warmed soil, and never allowing the least check to the plants. This plan must be followed, shifting as soon as needed, and giving bottom heat until the plants are in pots from 12 or 18 inches in diameter. These well ripened and placed out of doors in the autumn for a month or six weeks, will be in good order to start in November and December. The general routine has already several times been given. When pots are intended to bear continuously, about four bunches should be the medium. It is best to take a good crop, bring on fresh plants, and throw away the old ones.

Ice.—We went round and looked at the usual pools for supply, and, though there was but little water in the most of them to freeze, we had everything ready to take that little on the following day; but the thaw at night came more suddenly than the frost, and, instead of being helped by rolling snow, the snow had all disappeared before the morning. What ice we could have secured was very hollow, but still it would have been ice; and if we had not still a pretty good supply we certainly should have taken the first chance to obtain a little, even if we had put it in an ice-heap for present use. Most likely we will yet have a more continuous frost ere long; but, as the weather may be uncertain, it will be well not to lose another chance.

We find, on inquiry, that some of our confectioners in neighbouring towns procure the ice they want from London in summer, as the demand for ices, and cooled drinks, is growing even in our out-of-the-way places; and they consider that as yet this mode suits them better than having an ice-heap of their own, though they complain sadly of the necessary expense for carriage, &c., making sad work of what otherwise would be their profits. A larger demand for iced articles would, no doubt, lead to a more general supply. Many large hotels in the country thus obtain their ice from London, or the nearest seaport, and the blocks from Wexham Lake are most valued. In the case of some large hotels this practice is followed even after going to the expense of forming ice-houses, in which the ice will not keep; so that, simple though the matter seems to be, there must be some of the simplicities overlooked, where such failures take place. We have proved over and over again that snow, rolled into large heaps, and well consolidated in the ice-house or heap, is only a little inferior to ice for keeping. If too fluffy to beat well, a little water will remedy that defect. It is best rolled when soft. It is no use trying it when the surface is hard and frost-crusted; and collecting it without rolling it into huge balls is but poor work.—R. F.

TRADE CATALOGUES RECEIVED.

Sutton & Sons, Reading.—*Sutton's Amateur's Guide and Spring Catalogue for 1885.*

James Veitch, Royal Exotic Nursery, King's Road, Chelsea.—*Catalogue of Garden and Flower Seeds for 1885.*

COVENT GARDEN MARKET.—DECEMBER 24.

Supplies are good and the demand fair, but not very brisk. Pines and Grapes are fully sufficient for the demand; Apples abundant; but good dessert Pears not over-plentiful. Notwithstanding the severe frost of the 18th inst. and general coldness of the weather, the supply of out-door vegetables continues good. The first consignment of Cornish Broccoli has just arrived, and the heads though small are of very good quality. As usual at this season, the market is crowded with carts and waggons from the country bringing Christmas trees, evergreens, and Mistletoe, for which, notwithstanding the large quantities which have been already disposed of, there is still a ready sale.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples.....	1	0	2	0	Melons.....	each	2	6	to 4 0
Apricots.....	0	0	0	0	Mulberries....	punnet	0	0	0 0
Cherries.....	0	0	0	0	Nectarines.....	doz.	0	0	0 0
Chestnuts.....	14	0	20	0	Oranges.....	100	5	0	10 0
Currants, Red..	0	0	0	0	Peaches.....	doz.	0	0	0 0
Black.....	0	0	0	0	Pears (kitchen)..	bush.	5	0	10 0
Figs.....	0	0	0	0	dessert.....	doz.	1	6	4 0
Filberts.....	160	40	60	0	Free Apples.....	lb.	5	0	8 0
Cobs.....	70	0	80	0	Plums.....	½ sieve	0	0	0 0
Gooseberries...½	sieve	0	0	0	Pomegranates....	each	0	6	1 0
Grapes, Hamburgs	lb.	2	0	6 0	Quinces.....	½ sieve	4	0	6 0
Muscats.....	5	0	8	0	Raspberries.....	lb.	0	0	0 0
Lemons.....	160	5	0	10 0	Walnuts.....	bush.	14	0	20 0

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes	each	0	0	to 6	Horseradish ...	bundle	2	6	to 5
Asparagus	bundle	0	0	0	Leeks.....	basch	0	2	0
Beans Broad.....	½ sieve	0	0	0	Lettuce.....	score	2	0	4
Kidney.....	100	2	0	3	Mushrooms.....	pottle	1	6	2
Beet, Red.....	doz.	1	0	3	Must. & Cress, punnet	0	2	0	0
Brussell.....	bundle	1	0	2	Onions.....	baschel	4	0	5
BrusselsPresents ½ sieve	2	6	3	6	pickling.....	quart	0	6	0
Cabbage.....	doz.	1	6	3	Paraley.....	doz. bunches	4	0	6
Capitouns.....	100	0	0	0	Parsnips.....	doz.	0	9	1
Carrots.....	bundle	0	5	0	Peas.....	quart	0	0	0
Cauliflower.....	doz.	4	0	6	Potatoes.....	baschel	2	6	4
Celery.....	bundle	1	0	2	Radishes doz. bunches	0	9	1	0
Cucumbers.....	each	1	6	3	Savoy.....	doz.	1	0	2
Endive.....	doz.	0	0	0	Sea-kale.....	basket	1	6	3
Spinach.....	score	2	6	3	Spinach.....	½ sieve	3	0	5
Fennel.....	bunch	0	3	0	Tomatoes.....	½ sieve	0	0	0
Garlic and Shallots, lb.	0	8	0	0	Turnips.....	bunch	0	3	0
Herbs.....	bundle	0	3	0	Vegetable Marrow doz.	0	0	0	0

TO CORRESPONDENTS.

•• We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

HEATING BY GAS.—In answer to the inquiry made by "G. P. S.," I saw a very simple apparatus which appeared to answer the purpose for which it was intended in a small greenhouse belonging to a Mr. G. West, a retired ironmonger, whose invention it is. It is very simple, and consequently inexpensive; but whether the warmth generated would be sufficient for a large house I am unable to say. Mr. West lives on Bexley Heath, Kent, not far from Woolwich, and I am sure he will readily explain his method of heating, and, if required, would erect the apparatus.—G. A. LANGLAND.

CHARCOAL FOR VINES (*A Subscriber*).—We do not know the translation from the German you mention. If we wished to apply charcoal to the roots of Vines we should remove the earth down to the roots nearest the surface, and sprinkle some charcoal broken into small pieces over them. It might be done now.

BURNER'S BURNER (*W. Dickson*).—We do not know the maker, but we are told that the burner is well known to and supplied by the gas-fitters.

TAN FOR CLAYEY SOIL (*J. Hurst*).—Decayed tan will be a good and enduring manure for your garden; but, as it is infested with slugs, we would pare off and burn 6 inches in depth of the surface before applying the tan.

MARKET-GARDENING (*R. F. F.*).—We know of no other work on the subject besides that you mention.

FRENCH PELARGONIUMS (*K. D. J. M. Jersey*).—The best houses in Paris for Pelargoniums are Thibaut et Keteleer, Rue de Charonne, and Rougier-Chavrière, Rue de la Roquette.

PROTECTING BLOSSOM (*R. S.*).—Your thin canvases will do very well, but we would bring it within a foot of the ground, and only cover that space in severe nights. It would be well to have a two-feet opening every 12 feet, at the top of the wall, to open on sunny days. Your cloth will be more serviceable, if strained, for keeping the blossom dry, than for keeping out much frost.

DOUBLE-GLAZING (*M. R.*).—The distance between the two tiers of glass need not be more than the eighth of an inch. As you are using Hartley's rough plate glass, two tiers of that would exclude the light too much. The inner tier had better be of clear glass.

ASPHALT PATE (*Tyro*).—Take two parts of very dry lime rubbish, and one part coal ashes, also very dry, and both sifted fine. In a dry place, on a dry day, mix them, and leave a hole in the middle of the heap, as bricklayers do when making mortar. Into this pour boiling-hot coal tar; mix, and, when as stiff as mortar, put it 3 inches thick where the walk is to be. The ground should be dry and beaten smooth. Sprinkle over it coarse sand; when cold pass a light roller over it, and in a few days the walk will be solid and waterproof.

FUCHSIA—*CORONA SCANDENS* (*Ruby*).—We do not recognise the Fuchsia by the flower and leaves sent. The flower is that of *F. fulgens*, with the leaves of a reflexed-sealed kind, as Banks' Glory. As a flower, judged by the standard of the florist, it is valueless; but as a plant for greenhouse decoration, we should think it very ornamental. When it commences to grow thin out the suckers, leaving one only if you wish a plant with one stem, or two or three of the strongest, taking the others away. This will cause the sap to flow more freely into the shoots left, and they will be stronger in consequence, and the plant will bloom more freely. *Cobaea scandens* is not hardy so far as we know in any part of Ireland, except in very mild situations, and against walls when protected from frost by a covering of mats or straw. *Lomaria L'Hermierii*, *Nephrodium molle corymbifolium*, *Nothochloa lundigera* or *elegans*, *Lactaria glabella*, *Pteris argyrea*, and *Adiantum cuneatum*. *Anemidictyon phyllitidis* requires a cool stove to grow it well, though it will do well in a vinery; but what is a vinery but a stove in summer? In a greenhouse, especially if cool and airy, it does no good. We are quite certain the plant sent for us to name was *Polypodium cambricum*. We have plants of it from its native home with the fructification plentiful. The person alluded to, we are quite sure, only stated his own experience, and had only come across barren forms of the species.

CHRYSANTHEMUMS DOWN-BLOOMING (*Chrysanthemum*).—Keep the plants in the pots in a cold frame with the old stems cut down to the surface. Take cuttings in March or April, and these will soon root in a little heat. Such make nice small plants for blooming late in small pots. Shift them into 24-pots in May, and transfer into nine-inch pots in June. Stop them when well rooted to four leaves, and when they have pushed sufficiently stop again to four leaves by pinching out the tips of the shoots. Keep them stopped until the middle of July, then discontinue the stopping process. If you want large specimens pot the suckers in March, otherwise we like to do it in November, place in a cold frame for a few days, then harden off. In potting select the strongest and best rooted short-jointed suckers. Stop them when 6 inches high, and you may stop again in the end of May or beginning of June, and again in the end of that month or beginning of July. The *Mandevilla suaveolens* will most likely bloom another year if you do not cut it in too much, but merely thin out and shorten the shoots a little, giving it abundance of light and keeping it moderately dry at the root during the winter. It is one of the sweetest flowers grown.

PROPAGATING *POINSETTIA POLYCHERRA* (*E. M. S.*).—Cuttings of this put in about the middle of July will root freely if the pots are plunged in a hotbed. If they have two joints, one in and one out of the soil, they will do well. The cuttings are best inserted singly in 60-sized pots, in a compost of turfy peat, loam, and leaf mould in equal parts, with a free admixture of silver sand. This will suit established plants; but more sand should be mixed with the soil for the cuttings. The plants thus struck should be potted in six-inch pots, kept near the glass in a moist atmosphere in a stove temperature, and well watered. Cuttings may also be put in in February and treated in the same manner, stopping them in May, and much larger and earlier-blooming plants will be the result. It is an intermediate stove plant. There are many berry-bearing plants called Winter Cherries, but that usually known as the Winter Cherry, is *Physalis Alkekengi*. Any of the nurserymen who advertise in our columns can furnish you with double Fancies.

GREEN FLY ON GOOSEBERRY BUSHES (*J. King*).—We were at one time sorely pestered with fly on Currants and others of the Ribes family against walls. The fruit was dirty and not fit for use, though larger than that from bushes. We were in the habit of washing our wall trees with a solution of different ingredients at the winter dressing to prevent summer attacks of insects, and with good success tried it on the Ribes tribe, as the Gooseberry and Currant. It was made as follows:—One stone quicklime, and 14 lbs. sulphur vivum, 1 peck of soot, 14 lbs. soft soap, with tobacco water made by adding four gallons of water to the tobacco liquor of the tobacco manufacturers, sufficient to form the whole into the consistency of thin paint. With this we painted every branch, upward from the ground, with a common paint brush immediately after the winter pruning, or before the buds began to swell. Birds do not like the buds after this dressing, and the fly was not troublesome in summer, and in many cases did not attack the trees. If it did we syringed the trees during bright weather, just when the fruit was full grown, with tobacco water made by adding six gallons of water to the tobacco liquor of the shops, or by pouring a gallon of boiling water on an ounce of the strongest shag tobacco. The smoke of a large town would not bring on attacks of green fly, for we have grown Gooseberries in such a locality very fine and clean, and we were much assisted in the work by the grossly maltreated house sparrows, which devour green fly, caterpillars, and other garden pests. Preserve such friends as these and you will find them assist in ridding you of your enemy. We should think your Currants will not produce fine fruit if the leaves are taken off the bushes during the height of the growing season, especially if this practice be continued year after year.

GUM IN APRICOT TREES (*Hampshire Hills*).—There is, so far as we know, no cure for the gumming of fruit trees in some soils, and the Apricot is very subject to it on the red sandstone, and thin sandy soils with a gravelly subsoil. It will not interfere with bearing further than this, that a diseased branch is liable to die off at any time, and is just as likely to do so when the fruit is nearly ripe as at any other time. The gum which exudes should be removed with a knife, and the place pared down to the fresh bark, and the wound will heal over if the hole be stopped well with clay and cowdung. Though this may prevent the accumulation of gum at that part, the plaster assisting the healing of the wound, yet it will not prevent its exudation from another part of the tree. You will gain nothing by cutting the branches of the Pear tree back, but, on the contrary, lose a number of years in getting the wall covered again. We would insert some buds in the spurs on the lower parts of the branches next summer, and the buds, if they take, will, in a short time, produce fruitful spurs on the lower part of the branches.

BOTTOM HEAT DEFICIENT (B. T. E.).—We think your simplest plan will be to lower your slats a foot or 15 inches, so as to be 3 or 3 inches from the pipes. These two pipes ought to give you enough of bottom heat. Stop the top holes in the slats, and, if necessary, make two or three holes at the bottom of the chamber, near where your return-pipe now is. If you want more piping we think you would require it most for the atmosphere of the house. We presume your pipes in the vinery are all right as to level. The simplest way of heating such an arrangement would have been to have taken a flow from the boiler to a cistern at the farther end of the propagating-house—say 2 or 3 feet above the highest piping—and from thence, by plugs, give top or bottom, or vinery heat, as required.

HYACINTH CULTURE IN HOLLAND (A. N. Morris).—The articles to which you allude appeared in Nos. 19, 20, 21, 24, and 25, May and June 1883. They have not been republished.

NEW ROSES (H. L.).—Our Number published on Nov. 1 contains a criticism on the new Roses. You can have it free by post if you send four penny postage stamps to our office with your direction.

HEATING A PIT (T. W. U. R.).—Such pits, to be heated with dung, must be provided with linings, if early Melons or Cucumbers are desired. As you wish to have an open area round your pipes for bottom heat, your best plan would be to cover the chamber with slats, within 2 or 3 inches of the pipes. Place 6 inches of open rubble over the slats, beneath the soil, with openings back and front, by pipes or otherwise, to let the heat up. By pouring water into these openings, among the rubble, over the slats, you can have a moist bottom heat and a moist top heat at command, and a dry heat, as you desire. We have no objection to a tank, or evaporating-pans, on your pipes, but the above would be the simplest. For early work for such a pit you would need two four-inch pipes for bottom heat, and two for top heat. For late spring, summer, and autumn work, two pipes at bottom would do, if top heat, by means of openings, could be taken when necessary. For winter Cucumbers you would require three bottom and three top pipes. The simplest plan of all would be to have pipes alone for bottom heat, surrounded with clinkers, brickbats, &c., with means for sending water amongst these clinkers and bats when necessary. The reason why so many people fail in obtaining bottom heat from pipes is—the air gets too confined, and thus becomes a non-conductor; the material placed over them also gets too dry, and that becomes a non-conductor as well. It is a mistake to have a mound over such pipes, and expect it to be heated through, unless the air at the bottom of the mass is kept moist and in motion. See answers to other correspondents to-day, and lately, and Mr. Fish's description of heating at Mr. Lane's, of Berkhamstead, last season. There is no difficulty in getting plenty of bottom heat in Mr. Lane's enclosed chambers. Without chambers, with merely open rubble round the pipes, the secrets of success are moist air, and air in motion. These two little facts are, as respects heating by bottom heat, worth the expense of several volumes. The age of monuments, however, is passed, and well passed.

SEX OF AUCUBA (Idem).—The common *Aucuba japonica* of our gardens is the female variety. Mr. Standish has the male variety, introduced by Mr. Fortune.

VINES UNFRUITFUL (Tyro).—If you look back to Mr. Fish's description of border-making at Keele Hall and Trentham, or see what is said on the subject in the "Vine Manual," published at our office, you will see that you could not have done worse than plant the Vines at the bottom of your border, and take the stems in at the bottom of the front wall, as shown in your black ink line. Your red ink line would be preferable, but even that shows the Vines planted too low. As your front wall is 2½ feet high, make your border 2 feet 4 inches in height; place 9 inches of open rubble at the bottom, with a drain in front, and spread out the roots of the young Vines within 4 inches of the surface. Your Apples are small specimens of the Old Golden Pippin. They attain four times the size in an orchard-house.

LOBELIA GORDONII (A Lover of Flowers).—*Lobelia Gordonii* is a good deal in the same way as *Paxtoniana*. A lot of these *Lobelias* requires a microscope to distinguish them. We raised seedlings of *Paxtoniana* last year, and though like, they also differed a little from the parent, and we suspect this will be the case with the others less or more.

SUNDERLAND PUBLIC PARK (M. B.).—We do not know whether the prizes for the plans have been awarded. You had better write to the Town Clerk of Sunderland.

ICE-HOUSE (G. C. Penrith).—We think in your case, if the house is small, the lining with straw would be an advantage, but as it becomes wet it should be withdrawn. For years we have used none, and we thus get rid of much wasting vapour.

LATE VINERY (J. Goodear).—It will be safest to keep your vinery shut during frost. You may use it until March or April for wintering bedding plants. You will not start the Vines if you do not raise the temperature above from 40° to 45°. You may wash your Vines with a paint of clay and sulphur. You may do the same with Gishurst at about half a pound to the gallon.

AZALEA LEAVES FALLING (Liverpool).—The treatment you describe is good, only the buds were set or the growth made before the plants were placed outside; a cool house, however, would have been a better position for them, for the sudden changes consequent on their being placed out of doors, and brought in again, have had an injurious effect on the plants. The leaves falling so much is in most instances principally caused by forcing the plants to set their buds early in the season, and long weak growths are the consequence. The leaves fall early because they were formed early and imperfectly. We fear the drainage is not over-perfect, that the plants have been too freely watered, and the soil thus rendered unsuitable for the roots. A temperature of from 40° to 45° from fire heat is quite warm enough for Azaleas in winter. You say you noticed appearances of red spider on the leaves. This is rather uncommon; it was more likely to be thrips. You syringed the leaves with tobacco water, and that has been too strong, and turned the leaves brown—in fact destroyed them. The house should have been fumigated with tobacco, and so filled with the smoke that not a plant could have been seen from the outside. Leave the plants alone now, water only when they require it, and we think they will bloom well after all. Make the drainage more secure after they have bloomed, and pot them if they require it, elevating the necks of the plants a little in the centre of the pots. The buds of the shoots sent were sound, and will bloom we think.

NAMES OF FRUITS (C. R.).—Your Apple is certainly quite distinct from

Ribston Pippin, and is apparently a very excellent keeper, but we cannot say what it is. One of the specimens is exactly like a Ribston in appearance, but the flavour is quite different. (*J. B. Z.*).—Pears.—1, Colmar; 2, Broom-park; 3, Knight's Monarch; 4, Beurré de Rance; 5, Passe Colmar. Apples.—2, Ord's; 7, Dutch Mignonne; 8, King of the Pippins; 11, Sam Young; 12, Cox's Golden Drop; 14, Devonshire Queen; 15, Bedfordshire Foundling. The numbers not named are unrecognised. (*Montgomery*).—The large green Apples are Yorkshire Greening, and the round yellow ones Dumelow's Seedling. (*J. M. Miller*).—3, Passe Colmar; 4, Beurré d'Arenberg. The others were smashed.

NAMES OF PLANTS (M. P.).—1, *Blechnum occidentale minus*; 2, *Doodia caudata*; 3, *Goniophlebium appendiculatum*; 4, *Lastrea patens*; 5, *Asplenium fontanum*.

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

HAMBURGH FOWLS ARE PROFITABLE.

HAVING kept Gold and Silver-pencilled Hamburg fowls for some years I am able to speak respecting them. As layers they stand alone, never ceasing to lay but at moulting time; and the Golden lay much larger eggs than the Silver, and are healthy, bright, happy birds if allowed freedom, but they will not thrive in confinement. Being obliged to keep mine confined for about five weeks before the grass was cut, though a tolerable yard was allowed to each breed, their feathers became in a most deplorable state. First, the cock lost all the soft down of his hackles, the stump of the feathers remaining. The heads, breasts, and nearly all the feathers of the hens then became diseased. I tried cocoa-nut oil and turmeric rubbed on but to no purpose, and until the moulting season they never recovered their fine plumage. The cock nearly died. They ate well and continued laying, but they were frightful objects to look at. During this time they were well supplied with lettuce and greens, and always allowed to run on the lawn and garden every morning for a short time. I have found half-bred Silver or Gold Hamburgs lay larger eggs, and never offer to sit more than once in a year; and these would be the breed of poultry "CHANTICLEER" wants as "good egg-producers, hardy, easily reared, and not large." They mix well with the thoroughbred, and do not prevent the exhibition of prize poultry. I should advise a cross of the Dorking and Hamburg, and then putting some of these pullets with the thoroughbred birds. They (Hamburgs) are very easily reared and beautiful when first hatched. Out of thirty or forty I did not lose one this summer.

Very good birds may be bought by answering the advertisements in this Journal and learning the pedigree of the fowls.

A few feathers cut off one wing, leaving the flight or large wing feathers, will not disfigure the Hamburgs, and will prevent their flying over every fence.—SHARP-SPUR.

POULTRY-KEEPING FROM A COMMERCIAL POINT OF VIEW.

(Continued from page 502.)

THE ROOSTING AND LAYING ROOM.

This should be kept scrupulously clean, swept out daily, and occasionally thoroughly whitewashed. The floor, composed of concrete, ought to be slightly sanded over daily. The sides and ceiling, also the divisions of the nests for laying, should be made of boards well whitewashed. The nest (*fig. 5*), should be made of earthenware, and partly filled with fine sand or cocoa-nut refuse, and slightly sprinkled over with flowers of sulphur.

The roosting-perches should be formed of hot-water pipes, as they are of the utmost importance to keep the poultry warm during the cold nights, and cool during the hot nights, which will induce continuous egg-laying at a period when eggs are most scarce, whether for hatching or consumption.

Most persons must have observed that even the heaviest fowls will seek to perch nearest the ceiling, and that when roosting their feathers are ruffled or open. This is easily explained by all persons conversant with aerostatic laws—namely, that heated air being lighter than cold air, the former will ascend: consequently the warmest place in a

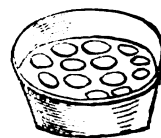


Fig. 5.
Earthenware Nest.

room will be nearest to the ceiling; and fowls open their feathers when roosting to admit the warm ascending air.

Another important point in the construction of this room is to create perfect ventilation without causing a draught. Now, different gases varying in their specific gravity are formed in this room—namely, carbonic acid, which is a heavy gas and hangs near the floor, ammoniacal gas from the excrements of fowls, and carbureted hydrogen gas from the exhalations of the fowls, both of which are light, and consequently rise to the ceiling. It therefore becomes necessary to adopt a principle of ventilation by which both the heavy and light gases can be got rid of without causing a draught, which would be prejudicial to the health of the fowls. This is accomplished by two pieces of perforated zinc, one opposite the other near the floor, and the same

near the ceiling, and at least 12 inches above the roosting-perches.

THE HATCHING ROOM.

This in my plan is situated above the roosting-room, and is composed of two compartments—the one in which the hen sits, the other where she has a supply of gritty dust to perform her ablutions (see fig. 6). The sides, floor, and ceiling are formed of boards well whitewashed. Light is admitted through a glass door from the passage, over which perforated zinc is fixed to provide for efficient ventilation. The roof is covered with asphalted felt, and the nest ought to be of earthenware, the same as those for laying.

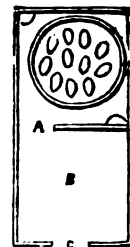


Fig. 6.—Plan of hatching-room.

THE POULTRY HOME AND VINERY.

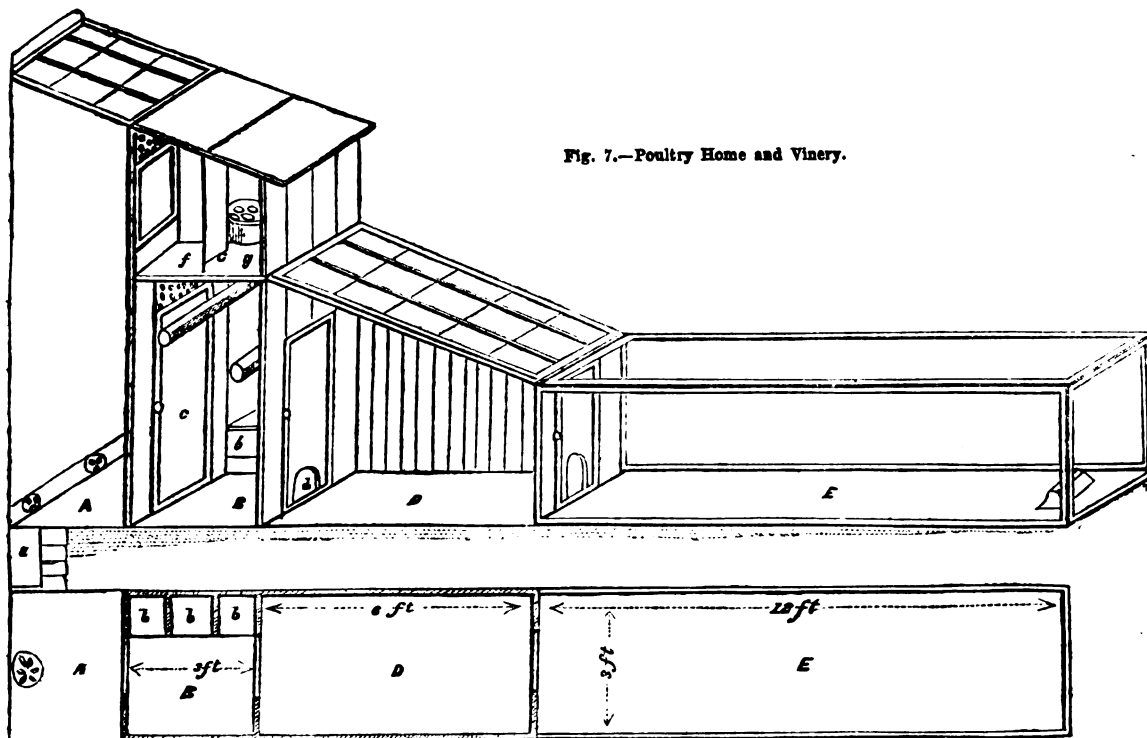


Fig. 7.—Poultry Home and Vinery.

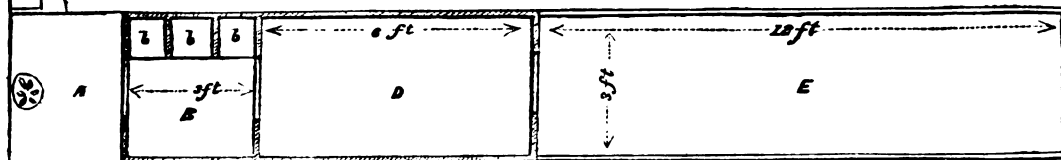


Fig. 8.—Plan of Poultry Home.

A is a glass-covered passage running the whole length of the building, and from which communication is obtained by means of doors to all the compartments of the homes on either side. This passage ought to be about 6 feet wide and 8 feet high to the rise of the roof.

a is a flue formed of bricks and covered-in with paving tiles, with ventilators at certain distances. This flue runs the whole length of the building, and ought to be about 9 inches wide and 15 inches deep. It serves for warming the building by means of hot air, steam, or hot-water pipes; and the admission of heat to the passage is regulated by means of the ventilators.

The floor should be formed of concrete, the sides of whitewashed boards, and the roof of glass, with moveable frames at certain distances to allow of ventilation. This passage can also be turned to profitable account without extra cost by being used as a vinery or greenhouse.

B is the roosting room, about 3 feet square and 6 feet high. The floor should be made of concrete, the sides and ceiling of whitewashed boards. Near the ceiling and to the floor pieces of perforated zinc ought to be fixed opposite one another for the thorough ventilation of this compartment. The partitions of nests, *b b b* (fig. 8), should be made of whitewashed boards, the top projecting about 3 inches to prevent the droppings falling in. The nests should be made of earthenware in the shape of fig. 5.

C is a door communicating with the passage, and D with the covered run. In this door an opening ought to be provided with a glazed slide for the egress and ingress of the fowls. In this compartment fowls should be fed in wet weather, and the drinking-fountain ought also to be placed here. The perches where practicable ought to be formed of cast-iron hot-water pipes running the whole length of the building. These can be partly covered with felt, which should be removeable for cleaning. These perches should be about 3 and 4 feet from the floor.

C. The hatching-pens are immediately over the roosting-room, and should be 3 feet deep, 18 inches wide, and 2 feet high. This space is divided into two compartments, *f* and *g*, the one for the nest and the other for the ablution of the hen in dry gritty dust (see fig. 6). The sides, floor, ceiling, and partition are made of whitewashed boards; the door is glazed with a perforated zinc plate over it for ventilation, and the roof covered with asphalted felt. The nest should be of earthenware, the same as that for laying (see fig. 5), with a layer of sand, which again is covered by a piece of fresh-cut turf, on which the eggs are placed. See "Natural Hatching" in a subsequent paper.

D. The glass-covered run should not be less than 6 feet long, 3 feet wide, 4 feet high to the rise, and 6 feet to the apex or top of the glass frame, which ought to be moveable to admit of ventilation. The sides should be formed of

whitewashed boards; and the floor of about 6 inches deep of gritty dust. A perch can also be fixed in this compartment with advantage.

2. The open run should not be less than 12 feet long, 3 feet wide, and 3 feet high, and the floor made of concrete, as shown in *fig. 1*. The sides and top should be of galvanised iron netting. It is not, however, advisable to fix wire netting in too great lengths without support, as, with the least strain upon it, it gets out of shape. The plan I recommend for the construction of open runs consists of separate wooden frames 6 feet by 3 feet, on which the wire netting is fixed

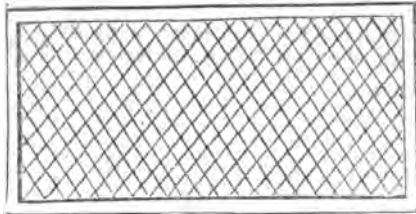


Fig. 9.—Wire Frame.

(see *fig. 9*), and grooved uprights in which these frames are slid (see *figs. 10* and *11*). The frames forming the top can

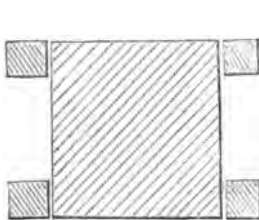


Fig. 10.—Central Upright.

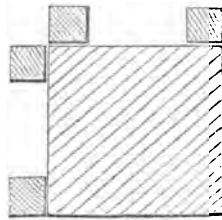


Fig. 11.—Corner Upright.

be joined together by hinges. By adopting this plan the whole run can be removed in a few minutes, or any part can be taken away for repair without interfering with the other, or some spare frames might even be kept in stock to replace those in want of repair.—G. K. GEYELIN, *Civil Engineer, London.*
(To be continued.)

THE POULTRY CLUB'S CENSURE OF THE BIRMINGHAM SHOW COMMITTEE.

I SEE by a report, printed and sent me by the Secretary of the Poultry Club, that a vote of censure was passed by the meeting on the Birmingham Committee for the appointment of the same Judges as last year at Bingley Hall. I beg to say that, although I took part in the discussion of several subjects at that meeting, the vote was passed after I with many others left the room, and that if I had been present at the time I should have opposed the vote most strongly, as I should have hesitated to censure a body of gentlemen from whom I have always received the greatest courtesy, and whose conduct is always characterised by such thorough fairness and honour, evinced towards exhibitors on all occasions.—JOHN K. FOWLER, *Prebendal Farm, Aylesbury.*

WHY ARE SHOWS HELD SIMULTANEOUSLY?

IN your report of the Leeds Poultry Show, you allude to the fact that the Newport Exhibition was held at the same time, and to the injury which meetings held thus simultaneously inflict upon each other. I am glad to see the subject noticed in your columns.

While on the one hand, we hear complaints both of the non-success of poultry shows, and of their dearth in the south of England, we find on the other hand existing exhibitions jostling one another, nay more, "cutting each other's throats," by seizing with fatal precision the same day for their respective meetings. Last year Basingstoke and Islington were contemporaneous. This very month Birmingham, Brighton, and York, were held at the same time.

Now, it is bad, certainly, for birds to travel from show to

show without an interval of rest, but it is worse for managers to injure each other's chances of success, and for exhibitors to lose half their chances of a prize, owing to the suicidal rivalry of leading shows. Can we not induce some of our managers to vary the monotony which crowds the month of December with incessant and competing shows, by a few exhibitions of old birds in the spring, and young ones in summer and autumn? Will not Islington or Alexandra Park, or the Crystal Palace take the hint? Can we not have a metropolitan show when London is full, and days are lengthening, when moreover a railway journey is not as at this wintry season an act of penance?—BRAHMA POOTRA.

MANCHESTER EXHIBITION OF POULTRY AND PIGEONS.

FOUR years have now passed away since the first show of poultry was held at the Belle Vue Zoological Gardens, Manchester. Year by year this meeting seems to grow more important, and to gain rapidly on public favour; in fact, the aggregate entries of the Show just concluded exceed those of last season by very nearly 130 pens—as strong a proof, perhaps, as could be adduced, that the untiring efforts of the Messrs. Jennison to deserve public support are duly appreciated by exhibitors generally.

The majority of our poultry readers are most probably aware, that the large Music Hall in connection with this establishment, is one of the most eligible and convenient places we can call to mind for the holding of such an exhibition. We may mention, too, the great advantage arising from the proprietors being able to thoroughly warm the whole building by hot-water apparatus, similarly constructed to those in use for horticultural purposes. The advantage arising from this fact, to such poultry as have been long accustomed to great care and attention when at home cannot possibly be overrated, and it was spontaneously acknowledged by several visitors, that the fowls not unfrequently came back from the Manchester Exhibition in actually improved condition to that in which their owners had forwarded them. "To serve all alike without respect to rank or station, the printed rules being always adopted," is punctiliously observed throughout the whole proceedings, and, consequently, when one knows that these regulations will be enforced, very few try to evade them, and general satisfaction ensues. We purpose making a few passing remarks on the classes generally.

Silver Grey Dorkings are the variety that head the list, and we cannot help feeling regret so beautiful a breed of poultry seem so little supported. The popular notion we are aware is, they are more tender to rear than the common-coloured Dorking; but our own experience in a run holding generally about a hundred specimens, convinces us they are equally hardy with other Dorkings, and that they lay more abundantly, which is no inconsiderable recommendation. The classes for Coloured Dorkings, except Silver Greys, were, however, exceedingly well filled at Manchester; the choicest specimens from the stockyards of Viscountess Holmesdale and Captain Horaby here vied with each other in close rivalry. It would be useless to hope for a better display. It was in these classes that Lady Holmesdale's adult Dorkings secured not only the first position for merit in their respective class, but also the extra silver cup given to the best pen of fowls in the Exhibition regardless of variety. About forty of the best first-prize pens were selected as fitting competitors for this principal premium, and the invidious and delicate task of such an award was deputed by the Messrs. Jennison to Mr. Hewitt, of Birmingham, alone; those gentlemen thus carrying out thereby the principle of "voting for the Judges," as pursued by the exhibitors at the time of making their entries, by individual endorsement on each entry paper. This fine pen of Dorkings is certainly one of the best pens we have seen for many years past, and was again shown in first-rate condition. We cannot pass over these classes without remarking that, perhaps, the competition in the Grey Dorking classes throughout was never excelled, consequently those Dorking breeders who missed the opportunity thus afforded lost a treat of no common character.

The Black Spanish were numerous, and shown in first-rate

condition. We are glad to see that the now old-fashioned corrugated faces once so coveted, are quite fallen in public estimation. That it is a direct step to improvement admits of no doubt, the exquisitely kid-like face, soft and unstained as a lady's dress glove, being infinitely more beautiful than the so-called "canflower" faces, that at three years old generally deprive the male birds not only of the power of vision, but even of feeding themselves at all without special assistance.

The classes for *Crève-Cœur* fowls may be regarded as an entire failure, for only two pens (both very good, however), were entered in the general class; and the class for *Single Cocks* was entirely empty.

The *Cochin* classes were almost a counterpart of the Birmingham Exhibition, Captain Heaton still standing a-head, but pressed even more closely than ever by his former competitors. Few fowls "ever worked so hard," to use the expressive term of a bystander, as these magnificent pens of poultry have done during the last few weeks. It is evidently telling rapidly on constitution, and to give these worthy antagonists a few weeks' rest to invigorate them before the fast-coming breeding season, would be a most prudent step for their respective owners, bearing so materially as it inevitably must do, on the robust character of next year's chickens. White Cochins were few as to entries, but little from perfection as to character; and the Partridge-coloured Cochins and also the *Brahmas* were good. The classes for the last-named breed were divided for light and dark-coloured birds.

The Silver-spangled *Polands* were quite the best of the Poland tribes exhibited, but the Black Hamburgs were very deficient specimens.

In *Hamburgs* we regretted to find several very "roupy" pens exhibited, capital birds, but quite out of place where they then were, even if considered only in common justice to the poultry in their vicinity. Silver-spangled Hamburgs were a most meritorious feature of the Show, but the Golden-spangled variety were unusually faulty in combs. Great care and attention to this point is necessary to success.

The *Game* fowls were a capital display, a great portion of them being evidently in the most perfect condition that could be desired, hitherto unaccustomed to the exhibition pen, and evidently competing to no mean advantage thereby over those that have been of late quite overtaxed by the combined trials of excessive travelling and close confinement.

The *Game Bantams* were especially good, as were the *Turkeys*, *Ducks*, and *Geese*. Among the latter were shown some extraordinarily fine specimens of the Sebastopol Geese, and a pen of Brant Geese, in so exquisite condition, that the feathers shone, and were smooth as the skin of a living seal. They attracted great attention.

The *Pigeons* were numerous and very good, and embraced the most perfect selections from all our principal breeders, and the accommodation for these public favourites could not have been improved.

DORKINGS (Silver Grey).—First, R. W. Boyle, Dundrum, Dublin. Second, D. Parsons, Cuerden, Preston. Highly Commended, Rev. T. O'Grady, Ashbourne. *Chickens*.—First, Rev. T. O'Grady. Second, D. Harding, Middlewich, Cheshire. Commended, Rev. J. F. Newton, Kirby-in-Cleveland.

DORKINGS (Silver Grey).—*Cockerel*.—First, M. Hedley, Red Hill, Surrey. Second, T. Statter, Stand Hill, Manchester. *Pullets*.—Prize, T. Statter.

DORKINGS (Coloured, except Silver Grey).—First, Viscountess Holmesdale, Staplehurst, Kent. Second and Third, Captain W. Hornby, Prescot. Highly Commended, Rev. J. F. Newton, Kirby-in-Cleveland, Yorkshire. Highly Commended, Sir St. G. Gore, Bart. Commended, W. A. Taylor; D. Parsons, Cuerden, Preston.

DORKINGS (Coloured, except Silver Grey).—*Hens or Pullets*.—First, Viscountess Holmesdale. Second, Sir St. G. Gore, Bart, Hopton Hall, Derbyshire. *Cock*.—First, Viscountess Holmesdale. Second, E. Tudman, Salop. Third, Captain W. Hornby. Commended, Rev. J. G. A. Baker, Biggleswade. *Cockerel*.—First, E. Shaw, Oswestry. Second, E. Tudman. Commended, Miss S. J. Whittem, Brierfield, Marsden, Lancashire. Highly Commended, Viscountess Holmesdale.

DORKINGS (White).—First, D. Parsons. Second, H. Saville, Ollerton. Highly Commended, Sir St. G. Gore, Bart.

CRÈVE-CŒUR.—Prize, J. Harrison, Blackpool. Commended, J. K. Fowler, Aylesbury.

SPANGLED.—First, Viscountess Holmesdale. Second, J. Garlick, Liverpool. Highly Commended, J. E. Rodbard, Wington, Bristol. *Chickens*.—First, E. Jones, Clifton, Bristol. Second, Viscountess Holmesdale. Third, J. E. Rodbard. Highly Commended, Master P. H. Stevens, Macclesfield. Commended, E. Brown, Sheffield; J. Garlick, Liverpool.

BRAHMA.—*Cock*.—First and Second, H. Lane, Bristol. Third, T. P. Wood, jun., Chesterfield. Commended, H. C. Mobbs; J. Smith, Openhaw. *Hens*.—First, H. Lane. Second, Viscountess Holmesdale, Staplehurst, Kent. Commended, S. Robson, Brotherton, Yorkshire; E. B. Postans, Brentwood. *Cockerel*.—First, S. Robson, Brotherton. Second, R. Paton.

Third, H. Beldon, Bingley. Commended, J. L. Lowden, Hartwell, Aylesbury; E. Brown, Sheffield. *Pullets*.—First, H. Lane.

COCHIN-CHINA (Cinnamon and Buff).—First, Captain H. Heaton, Manchester. Second, H. Bates, Birmingham. Third, C. T. Bishop, Lenton, Nottingham. Highly Commended, R. Adams, Handsworth, Birmingham. Commended, C. T. Bishop. *Chickens*.—First, J. Nelson, Heaton Mersey, Manchester. Second, R. Adams. Third, Captain H. Heaton. Highly Commended, W. F. Zarhorst, Donnybrook, Dublin; J. Shawcross, West Gorton, Manchester.

COCHIN-CHINA (Cinnamon and Buff).—*Cock*.—First, W. F. Zarhorst, Donnybrook, Dublin. Second, J. Smith, Openhaw. Third, H. Ogden, Ashton-under-Lyne. Highly Commended, E. Bamrose, sen.; J. Kerahaw, Mossley. Commended, C. Kerahaw, Ashton-under-Lyne; Captain H. Heaton, Lower Broughton, Manchester; J. Shawcross, West Gorton, Manchester. *Pullets*.—First, Captain H. Heaton. Second, C. T. Bishop, Lenton, Nottingham. Third, T. Stretch, Ormakirk. Highly Commended, C. T. Bishop; J. Nelson.

COCHIN-CHINA (Brown and Partridge-feathered).—First, E. Tudman, Whitechurch, Salop. Second, C. Kerahaw, Ashton-under-Lyne. Highly Commended, J. Stephens, Wallsall, Birmingham; T. Stretch, Ormakirk. *Chickens*.—First, E. Tudman. Second, C. E. Riddale, Skircoat, Halifax. Third, C. Durham, Manchester. Highly Commended, W. A. Taylor, Manchester. Commended, T. Stretch.

COCHIN-CHINA (Brown and Partridge-feathered).—*Hens or Pullets*.—First, C. W. Brierley, Middleton. Second, E. Tudman, Whitechurch, Salop. Highly Commended, J. R. Rodbard, Wington, Bristol. *Cockerel*.—First, J. Elliott, West Leigh, Lancashire. Second, T. Bott, Bury, Lancashire. Third, E. Tudman. Highly Commended, W. H. Kerahaw, Ashton-under-Lyne. Commended, E. Tudman; J. Ashcroft, Liverpool.

COCHIN-CHINA (White).—First, R. Chase, Birmingham. Second, G. Lamb, Compton, Wolverhampton. Highly Commended, Rev. F. Taylor, Kirby-Lonsdale. *Cock*.—First, G. Lamb. Second, R. Chase. Highly Commended, Rev. F. Taylor. Commended, W. Copple, Prescot.

BRAHMA (Light).—First and Commended, J. Pares, Chertsey. *Chickens*.—First, J. Pares. Second, F. Crook, Forest Hill, London.

BRAHMA (Dark).—First, H. Lacy, Lacy House, Hebban Bridge. Second, W. Hargreaves, Bampton. Third, R. W. Boyle, Dundrum, Dublin. Commended, J. B. Stevens, Macclesfield. *Chickens*.—First, H. Lacy. Second, J. K. Fowler, Aylesbury. Third, R. W. Boyle. Commended, W. A. Taylor, Manchester; H. Lacy. *Cockerel*.—First, T. Statter, Stand Hill, Manchester. Second, J. Poole, Ulverston, Lancashire. Highly Commended, W. Hargreaves. Commended, H. Lacy.

POLISH (Silver).—First, H. Beldon, Gilstead, Bingley, Yorkshire. Second, J. Heath, Cheshire. Highly Commended, J. Percival, Harborne, Birmingham.

HAMBURGH (Black).—First, J. Hope, Oldham. Second, R. F. Goodwin, Middleton. *Chickens*.—First, R. F. Goodwin. Second, H. Saville, Notts. *Cock*.—First, H. Beldon, Gilstead, Yorkshire. Commended, W. K. Duxbury, Leeds.

HAMBURGH (Golden-pencilled).—First, T. Wrigley, sen., Tonge, Middleton. Second, J. E. Powers, Biggleswade, Beds. Commended, J. Grundy, Wrigley, Manchester. *Chickens*.—First and Second, F. Pittis, jun., Isle of Wight. Third, Miss M. A. Fielding, Newchurch, Manchester. Highly Commended, E. Bamrose, sen.; Sir St. G. Gore, Bart., Hopton Hall, Derbyshire. Commended, J. Moss, West Gorton; J. Gleave, Cheshire. *Cockerel*.—First, T. Wrigley, jun. Second, Rev. R. Roy, Worcester. Third, J. E. Powers. Commended, F. Pittis, jun.; C. Tattersall.

HAMBURGH (Silver-pencilled).—First, Sir St. G. Gore, Bart. *Chickens*.—First, Sir St. G. Gore, Bart. Second, W. Bradley, Worcester. Third, Miss M. A. Fielding, Newchurch, near Manchester. *Cockerel*.—First, D. Illingworth, Burley, Yorkshire. Second, H. Charnock, Ayrington.

HAMBURGH (Golden-spangled).—First, I. Davies, Birmingham. Second, Sir St. G. Gore, Bart. Third, N. Marlor, Denton. Highly Commended, S. H. Hyde, Ashton-under-Lyne. Commended, J. Pickles, Slaithwaite. *Chickens*.—First, Miss E. Marlor, Denton. Second, J. Roe, Hadfield. Third, M. H. Broadhead, Holmfirth. Highly Commended, J. Buckley, Ashton-under-Lyne; W. H. Nicholls, Sale, near Manchester; Sir St. G. Gore, Bart. *Cockerel*.—First, J. Mellor, Slaithwaite. Second, J. Roe. Third, Sir St. G. Gore, Bart. Commended, Miss A. A. Roe, Hadfield; C. Broadbent, Saddleworth.

HAMBURGH (Silver-spangled).—First, Sir St. G. Gore, Bart. Commended E. T. Holden, Walsall, near Birmingham. *Chickens*.—First, Sir St. G. Gore, Bart. Second and Third, J. Fielding, Newchurch, Manchester. *Cockerel*.—First, Sir St. G. Gore, Bart. Second, J. Fielding.

HAMBURGH (Spangled).—*Hens*.—First, Miss A. A. Roe, Hadfield. Second, S. H. Hyde, Ashton-under-Lyne. Third, J. Beesley, Sale, Cheshire. Highly Commended, H. Beldon, Gilstead; W. Cooper, Helmsley. Commended, W. Cooper; W. K. Duxbury, Leeds. *Pullets*.—First, J. Wright, Mellow Mowbray. Second, E. Hyde, Ashton-under-Lyne.

GAME FOWL (Black-breasted Reds).—First, J. Halsall, Ince, Wigan. Second, Sir St. G. Gore, Bart. Third, J. Fletcher, Stoneclough, Manchester. Highly Commended, J. H. Williams, Welshpool; W. K. Duxbury, Leeds. *Cock*.—First, W. Gamon, Thornton-le-Moors, Chester. Second, Sir St. G. Gore, Bart. Third, J. H. Williams. Highly Commended, J. Smith, Breder Hills, Grantham. *Chickens*.—First, J. Halsall. Second, H. Thompson, Milnethorpe, Westmoreland. *Cockerel*.—First, W. Gamon. Second, Sir St. G. Gore, Bart.

GAME FOWL (Brown and other Reds, except Black-breasted).—First, J. Smith, Breder Hills. Second, T. West, St. Helens, Lancashire. Third, J. Fletcher, Stoneclough, Manchester. Highly Commended, T. Statter, Stand Hill, Manchester. *Cock*.—First, J. Smith. Second, T. Statter. Third, R. Swift, Southwell, Notts. Highly Commended, N. Grimshaw, Burnley; W. Galley, Nantwich; E. Bowens, Nantwich. *Chickens*.—First, T. West. Second, J. Fletcher. Third, E. Aykroyd, Bradford. Highly Commended, M. Billing, jun., Erdington, Birmingham. *Cockerel*.—First, M. Billing, jun. Second, T. Statter. Third, N. Grimshaw.

GAME (Black-breasted and other Reds).—*Hens*.—First, C. W. Brierley, Middleton. Second, G. Clements, Birmingham. Third, C. B. Kennedy, Ulverston. *Pullets*.—First, J. H. Cook, Worcester. Second, T. West, St. Helen's. Third, H. Backhouse, Blackburn. Fourth, J. Halsall, Ince, Wigan.

GAME FOWL (Duckwings and other Greys and Blues).—First, Sir St. G. Gore, Bart. Second, J. Fletcher, Stoneclough. Third, S. Matthew, Stowmarket. *Chickens*.—First, Sir St. G. Gore, Bart. Second, J. Halsall, Ince, Wigan. Third, E. Aykroyd, Bradford.

GAME (except Black-breasted and other Reds).—*Cock*.—First, M. Billing,

jun., Erdington, Birmingham. Second, Sir St. G. Gore, Bart., Hopton Hall. Third, S. H. Walwyn. *Hen*.—First, J. Halsall, Ince, Wigan. Second, Mrs. E. Whittam. *Cockerel*.—Prize, W. K. Duxbury, Leeds.

GAME (White and Piles).—First, J. Fletcher, Stoneclough. Second, Sir St. G. Gore, Bart. *Chickens*.—Prize, J. Fletcher. *Cockerel*.—First, J. Fletcher. Second, H. Thompson, Milnethorpe.

GAME BANTAMS (Black-breasted and other Reds).—*Chickens*.—First, J. Hilton, Ashton-under-Lyne. Second and Third, J. Munn, Newchurch. Fourth, R. Swift, Southwell. Highly Commended, Sir St. G. Gore, Bart., Hopton Hall; R. B. Postans, Brentwood.

GAME BANTAMS (Any other variety).—*Chickens*.—First, E. Mapplebeck, Moseley, Birmingham. Second, R. Hawksley, jun., Southwell.

GAME BANTAM COCKS.—First, C. W. Brierley, Middleton. Second, Sir St. G. Gore, Bart. Third, G. Smith, Staveley, Chesterfield. *Cockerel*.—First, W. Brierley. Second, W. Gamon, Thornton-le-Moors. Third, Miss Crawford, Farnfield. Highly Commended, G. Smith.

BANTAMS (White, Clean-legged).—First, E. Mapplebeck, Moseley. Second, Miss K. Charlton, Bradford.

BANTAMS (Black, Clean-legged).—*Chickens*.—First, Miss K. Charlton, Bradford. Highly Commended, F. Pittis, jun., Isle of Wight.

BANTAMS (Any other variety).—First, W. J. Cope, Barnsley (Pekin Bantams). Second, P. W. Story, Daventry (White Feathered-legged). Highly Commended, H. Salville, Ollerton, Notts (Japanese Silky).

DUCKS (White Aylesbury).—First and Highly Commended, J. K. Fowler, Aylesbury. Second, Sir K. Clifton, Bart., Clifton Hall, Notts.

DUCKS (Rouen).—First, R. W. Boyle, Dundrum. Second, J. Holmes, Knowsley. Third, C. P. Ackers, Bickershaw, Wigan. Fourth, Sir St. G. Gore, Bart. Highly Commended, J. Nelson, Heaton Mersey.

DUCKS (Black East Indian).—First and Second, J. W. Kelleway, Isle of Wight. Third, F. W. Earle, Prescott.

DUCKS (Any other variety).—First, T. H. D. Bayly, Biggleswade (Brown Call). Second, C. P. Ackers, Bickershaw, Wigan (Brown Call).

ORNAMENTAL WATER FOWL.—First, J. Jennison, Zoological Gardens, Manchester (Carolinian). Second and Highly Commended, H. Savile, Ollerton, Notts (Mandarin, Sebastopol Geese, and Carolinas).

GESE (White).—First, W. Kershaw, Heywood, Manchester. Second, Mrs. M. Seamons, Aylesbury. Highly Commended, J. Brundrett, jun., Chorlton-cum-Hardy, Manchester; W. K. Duxbury, Leeds.

GESE (Grey and Mottled).—First, R. W. Boyle, Dundrum.

TURKEYS.—First, J. R. Wood, Lower Crumpsall, Manchester. Highly Commended, J. Wood, Wigan. *Poult*.—First, J. Smith, Breder Hills. Second, R. W. Boyle, Dundrum. Highly Commended, W. Wright, Fulbourne, Cambridgeshire.

EXTRA STOCK (Any other variety).—First, E. Jones, Clifton, Bristol (Silver-laced Bantams). Second and Third, Mrs. E. Haig, Litchfield (Magpie Tarifans).

PIGEONS.

POWTERS.—First and Second, P. Eden, Salford.

CARRIERS (Black).—*Cock*.—First, F. Elze, Bayswater, London. Second and Third, P. Eden, Salford. *Hen*.—First, F. Elze. Second and Third, P. Eden.

CARRIERS (Any other colour).—*Cock*.—First, P. Eden, Salford. Second, H. Morton, Maclefield. Third, C. J. Samuels, Birch Lane, Longsight.

Hen.—First, F. Elze, Bayswater, London. Second, P. Eden. Third, A. P. Leite, Manchester. Commended, H. Morton; F. Elze.

DRAGONS.—First, W. H. Snashall, Gedney, near Long Sutton. Second, J. Percival, Peckham, Surrey. Third, H. Yardley, Birmingham. Commended, W. Woolley, Cheshire; H. Magon, Hollingworth, near Manchester; S. A. Taylor, Birmingham.

JACOBIANS.—First and Third, J. Hookenhull, Nantwich. Second, T. H. Ridpath, Rusholme, Manchester. Highly Commended, T. H. Ridpath.

NUNS.—First, F. Elze, Bayswater, London. Second, T. H. Ridpath, Rusholme, Manchester. Third, E. Mapplebeck, Woodfield, near Birmingham. Commended, J. W. Edge, Aston New Town, Birmingham.

RUNTS.—First and Second, J. Bally, jun., Mount Street, London. Highly Commended, J. Bally, jun.

BARBES.—First and Second, P. Eden, Salford. Third, A. P. Leite, Manchester. Very Highly Commended, W. Woolley, Banbury, Cheshire.

TURBOTS.—First, W. Edge, Aston New Town, Manchester. Second, E. Mapplebeck, Woodfield, near Manchester. Very Highly Commended, H. Yardley, Birmingham.

OWLS.—First and Third, S. Sanday, Holme Pierrepont, Notts. Second, P. Eden, Salford. Notts. Highly Commended, P. Eden.

TRUMPETERS.—First, S. A. Taylor, Lozells, Birmingham. Second, F. Elze, Bayswater, London. Third, W. H. C. Oates, Besthorpe, Newark, Notts.

FANTAILS.—First, F. Elze, Bayswater, London. Second, H. Yardley, Birmingham. Commended, J. Bally, jun., Mount Street, London.

TUMBLERS (Almond).—First, F. Elze, Bayswater, London. Second, P. Eden, Salford. Highly Commended, P. Eden.

TUMBLERS (Any other variety).—First and Second, P. Eden, Salford. Highly Commended, W. Leyland, Altrincham.

BEARDS.—First, W. H. C. Oates, Besthorpe, Newark, Notts. Second, C. E. Samuels, Birch Lane, Longsight. Commended, F. Elze, Bayswater, London.

ANY OTHER VARIETY.—First, A. P. Leite (Laced Fantails). Second, Rt. Hon. the Countess of Derby (Isabells). Third, H. Yardley, Birmingham (Satinettes). Extra Prize, T. H. Ridpath, Rusholme, Manchester (Balde). Commended, J. Bally, jun., Mount Street, London (Priests).

RABBITS.

BLACK AND WHITE.—First, H. Handford, Wilford, Notts. Second, A. Firth, Hyde.

YELLOW AND WHITE.—First, W. Howell, Harborne, Birmingham. Second, W. Stelfox, Greenheys, Manchester. Highly Commended, T. H. Ridpath, Rusholme, Manchester.

TORTOISESHILL.—First, A. Cattle, York. Second, T. H. Ridpath, Rusholme, Manchester. Highly Commended, W. Stelfox, Greenheys, Manchester.

BLUE AND WHITE.—First, Messrs. Hall & Co., Plumstead, Kent. Second, W. Hall, Leek, Staffordshire.

GRAY AND WHITE.—First, A. Firth, Hyde. Second, T. Tunaby, Kensington, Derby.

SKIP COLOUR.—First and Second, T. H. Ridpath, Rusholme, Manchester.

LOWEST EARS.—Prize, J. Read, Coventry. Highly Commended, W. Stelfox, Greenheys, Manchester.

HEAVIEST WEIGHT.—Prize, E. E. M. Roys, Greenhill, Rochdale.

FOREIGN RABBITS.—First and Second, J. Buchanan, Hertford.

JUDGES.—*Poultry*: Game, Game Bantams, Ducks, Geese, Turkeys, Ornamental Water Fowl, &c., Mr. Douglas, Mr. Chaloner, and Mr. Adams. Dorking, Spanish, Cochinchina, Brahma Pootra, Crève-Cœur, Polish, and Hamburg, Mr. Hewitt and Mr. Dixon. *Pigeons*: Dr. Cottle, Cheltenham. *Rabbits*: Mr. Owen, London.

LORD TREDEGAR'S POULTRY SHOW.

DECEMBER 13TH.

AMONG the birds were contributions from almost all parts of the kingdom, and the prize list will show that the competitors included the first poultry fanciers of the day. Many of the pens were really beautiful and merited the admiration they received. As usual the shed was crammed during the whole time it was open. As Mr. Logan took the champion prize for cattle, it is gratifying to find that in the poultry also, the prize given to the exhibitor who obtains the greatest number of prizes, has, notwithstanding the close competition, been retained in our own neighbourhood, it having fallen to the lot of our townsman, Mr. R. H. Nicholas, whom we have pleasure in congratulating upon his success. There was very nearly a tie between Mr. Nicholas and Mr. Fowler, the celebrated Duck breeder of Aylesbury—the former gentleman having sixty-four points, and the latter fifty-nine, the prize being reckoned by points, of which five are counted for a first prize, and so in proportion, a point less for each next inferior prize.

The following prizes were awarded:—

A Piece of Plate value Five Guineas, given by the Poultry Committee, to the Exhibitor taking the greatest number of Prizes, R. H. Nicholas, Malpas, Newport.

SPANISH.—First, R. H. Nicholas, Malpas, Newport. Second, J. K. Fowler, Prebendal Farm, Aylesbury. Commended, Mrs. N. Grenville, Butleigh Court, Glastonbury; J. Llewellyn, Caerphilly, Cardiff.

DORKING (Coloured).—First, J. K. Fowler, Prebendal Farm, Aylesbury. Second, J. Buckley, Penyfai House, Llanelly. Highly Commended, Hon. F. C. Morgan, Ruperra Castle, Glamorgan; C. Lyne, Brynhyfryd, Newport; J. Logan, Maindee House, Newport.

DORKING (White).—First and Second, R. H. Nicholas, Malpas, Newport. Commended, H. J. Evans, Brecon Old Bank, Cardiff.

GAME (Black or Brown-breasted Reds).—First, M. Billing, jun., Wood End, Erdington, Birmingham. Second, J. H. Braikenridge, Chew Magna, Bristol. Highly Commended, R. H. Nicholas, Newport; J. Llewellyn, Caerphilly, Glamorgan. Commended, W. K. Duxbury, Leeds.

GAME (Duckwings or other Greys and Blues).—First, J. B. Chuna, Coalbrookdale, Shropshire. Second, Messrs. J. A. & W. H. Briggs, Prospect House, Manningham, Bradford. Commended, F. King, Wellington, Salop.

GAME (Any other variety).—First, J. Llewellyn, Caerphilly, Cardiff. Second, T. Fletcher, Great Malvern.

COCHIN-CHINA (Coloured).—First, W. Bowly, Siddington House, Cirencester. Second, J. Gardiner, Bristol. Commended, Mrs. E. Everett, Monmouth; W. Bradley, Worcester.

COCHIN-CHINA (White).—First, F. W. Zurhorst, Belville, Donnybrook, Dublin. Second, J. Gardiner, Bristol. Commended, Mrs. E. Everett, Monmouth.

BRAMA POOTRA.—First, J. Hinton, Hinton, Bath. Second, J. K. Fowler, Aylesbury. Commended, Right Hon. Lord Tredegar, Tredegar Park; J. Hinton; E. Pigeon, Lympstone, Exeter.

HAMBURGHS (Gold or Silver-pencilled).—First, J. A. & W. H. Briggs, Manningham, Bradford. Second, J. Holland, Chasnut Walk, Worcester. Third, J. K. Fowler, Aylesbury. Commended, W. Clarke, Wellington, Shropshire; T. Fletcher, Great Malvern.

HAMBURGHS (Gold or Silver-spangled).—First, W. K. Duxbury, Leeds. Second and Third, T. Davies, Stow Hill, Newport. Highly Commended, T. Davies.

POLANDS (Black with White Crests).—First, R. H. Nicholas, Malpas, Newport. Second, T. Fletcher, Great Malvern.

POLANDS (Golden or Silver).—First, R. H. Nicholas, Malpas, Newport. Second, J. Hinton, Hinton, Bath. Commended, W. Pickford, Clifton Place, Newport.

MALAYS OR INDIAN GAME.—First and Second, J. J. Fox, Devizes, Wilt.

Highly Commended, J. Hinton, Hinton, Bath.

BANTAMS (Game).—First, J. K. Fowler, Aylesbury. Second, C. Cambridge, Colborne Villa, Coronation Road, Bristol. Highly Commended, E. Pigeon, Lympstone, Exeter. Commended, Mrs. E. Everett, Monmouth.

BANTAMS (Black or White).—First and Second, T. Davies, Newport.

BANTAMS (Any other variety).—First, Miss G. Everett, Gibraltar Cottage, Monmouth. Second, R. H. Nicholas, Malpas, Newport.

ANY OTHER DISTINCT BAKEN.—First and Second, R. H. Nicholas, Malpas, Newport. Third, F. W. Zurhorst, Belville, Donnybrook, Dublin. Fourth, Miss Brown, Hardwick House, Chepstow. Fifth, J. K. Fowler, Aylesbury. Commended, E. Pigeon, Lympstone, Exeter (La Fliche); R. H. Nicholas (Black Minorcas).

GUINIA FOWLS.—First, J. K. Fowler, Aylesbury. Second, R. H. Nicholas, Malpas, Newport. Commended, Sir G. Walker, Bart., Castletown, Cardiff; S. Lang, jun., the Shrubbery, Redland, Bristol.

DUCKS (Aylesbury).—First, J. K. Fowler, Aylesbury. Second, J. Pye, Spitty Farm, Abergavenny. Highly Commended, J. Logan, Maindee House, Newport; J. K. Fowler. Commended, H. J. Evans, Brecon Old Bank, Cardiff.

DUCKS (Rouen).—First, J. K. Fowler, Aylesbury. Second, R. H. Nicholas, Malpas, Newport. Highly Commended, J. Logan, Newport; S. Lang, Redland, Bristol. Commended, W. Stephens, Higham Green, Gloucester.

GREENS.—First, R. Rees, Coalbrook Cottage, Abergavenny. Second, J. K. Fowler, Aylesbury. Highly Commended, R. Rees; J. K. Fowler; A. Cuthbertson, Llangibby.

TURKEYS.—First, Miss J. Milward, Newton St. Loe, Somerset. Second, J. K. Fowler, Aylesbury. Highly Commended, F. C. Morgan, Ruperra Castle, Glamorgan. Commended, F. C. Morgan; C. Lyns, Brynhyrdd, Newport; H. J. Evans, Brecon Old Bank, Cardiff.

SELLING CLASS (For Fowls of any age).—First, R. H. Nicholas, Newport (Hamburgs). Second, J. Hinton, Hinton Bath (Brahma Pootra). Third, E. Shaw, Plas Wilmot, Oswestry (Grey Dorkings). Commended, R. H. Nicholas, Newport (Golden Poland and Silver-pencilled Hamburgs); J. Hinton, Hinton, Bath (Silver Poland); W. K. Duxbury, Leeds (Hamburgs); Messrs. J. A. & W. H. Briggs, Manningham, Bradford.

SWEETSTAKES FOR SINGLE COCKS.

SPANISH.—First, J. K. Fowler, Aylesbury. Second, R. H. Nicholas, Malpas, Newport.

DORKING.—Prize, E. Shaw, Plas Wilmot, Oswestry. Highly Commended, J. Logan, Malpas House, Newport.

GAME.—Prize, G. S. Sainsbury, Devizes. Highly Commended, J. B. Chubb, Coalbrookdale, Shropshire. Commended, R. H. Nicholas, Malpas, Newport.

COCHIN-CHINA.—Prize, J. K. Fowler, Aylesbury.

BANTAM (Game).—First, R. H. Nicholas, Malpas, Newport. Second, J. K. Fowler, Aylesbury.

ANY OTHER VARIETY.—Prize, R. H. Nicholas, Malpas, Newport (Brahma Pootra). Highly Commended, E. Pigeon, Lymington, Exeter (Brahma Pootra).

COTTAGERS' PRIZES.

FOWLS.—First and Third, T. Thomas, Machen Fach, Newport (Red and Pile Game). Second, G. Boundy, Malpas, Newport (Silver-pencilled Hamburgs). Fourth, Mrs. E. Ford, Malpas, Newport (Golden-spangled Hamburgs). Highly Commended, W. Jenkins, Malpas, Newport (Dorking).

DUCKS.—First and Fourth, G. Boundy, Malpas, Newport (Aylesbury). Second, W. Reed, Malpas, Newport (Aylesbury). Third, J. Thomas, Pontnewydd, Pontypool (Aylesbury).

PIGEONS.

CARRIERS.—First, H. Yardley, Market Hall, Birmingham. Second, C. Bulpin, River Side, Bridgwater. Highly Commended, O. Phillips, jun., Newport.

POWTERS.—First, H. Yardley, Birmingham. Second, G. S. Sainsbury, Devizes, Wilts. Commended, C. Bulpin, Bridgwater; J. W. Edge, Aston New Town, Birmingham; C. Phillips, jun., Newport; E. Pigeon, Lymington, Exeter.

TUMBLERS.—First, H. Yardley, Birmingham. Second, F. Barfoot, Newport. Highly Commended, W. Bowly, Siddington House, Cirencester; J. W. Edge, Aston New Town, Birmingham.

FANTAILS.—First, T. Rowe, Newport. Second, Miss J. Milward, Newton St. Loe, Somerset. Highly Commended, H. Yardley, Birmingham; G. S. Sainsbury, Devizes, Wilts.

ANY OTHER VARIETY.—First, E. Pigeon, Lymington, Exeter (Magpies). Second and Third, H. Yardley, Birmingham. Highly Commended, E. Pigeon, Lymington, Exeter (Turbits).

Judge for the Poultry, Mr. Angus Sutherland, Burnley Lancashire.—(Monmouth Merlin.)

NORTH BRITISH COLUMBIAN SOCIETY.

THIS Society held their sixth annual Exhibition of Fancy Pigeons and Canaries in the Trades Hall, Glassford Street, Glasgow, on the 23rd and 24th December. We have only room for the awards; our remarks will appear next week.

POWTERS (Pie), except Yellows.—Medal and Second, M. Stuart, Glasgow (Blacks and Blues). Third, J. Muir, Glasgow (Blacks). Very Highly Commended, W. Lightbody, Glasgow (Blues). Highly Commended, D. Stewart, Perth (Blues).

POWTERS (Yellow Pied).—Medal, G. Ure, Dundee. Very Highly Commended, J. Wallace, Glasgow. Highly Commended, H. Simpson, Newark.

POWTERS (White).—Medal, J. Wallace, Glasgow. Highly Commended, G. Ure, Dundee; R. Fulton, London.

POWTERS (Black Cocks).—First, G. Ure, Dundee. Second and Highly Commended, J. Montgomery, Belfast. *Hens.*—First, M. Stuart. Second, J. Montgomery. Highly Commended, R. Arbuckle.

POWTERS (White Cocks).—Painting and First, G. J. Maclean, Edinburgh. Second, M. Sanderson, Edinburgh. Highly Commended, J. Wallace, Glasgow; J. Luis, Edinburgh; J. Ruthven, Glasgow. Commended, G. Ure, Dundee. *Hens.*—First and Second, M. Sanderson. Very Highly Commended, J. Montgomery. Highly Commended, J. Wallace, Glasgow; G. Ure, Dundee.

POWTERS (Blue Cocks).—First and Second Sp., J. H. Frame, Carlisle. Second, G. Ure, Dundee. Highly Commended, J. Wallace; G. Ure; J. Ruthven, Glasgow; D. Stewart, Perth. *Hens.*—First, W. Lightbody, Glasgow. Second, J. Ruthven. Very Highly Commended, W. Lightbody. Highly Commended, M. Stuart, Glasgow; J. Ruthven; M. Sanderson, Edinburgh.

POWTERS (Red Cocks).—First, J. Wallace, Glasgow. Second, J. Montgomery, Belfast. Highly Commended, M. Stuart, Glasgow; J. Luis, Edinburgh. *Hens.*—First and Second, G. Ure, Dundee.

POWTERS (Yellow Cocks).—First, G. Ure, Dundee. Second, J. Montgomery, Belfast. Highly Commended, H. Brown, Sheffield. *Hens.*—First, G. Ure. Second, M. Stuart, Glasgow. Highly Commended, J. Wallace. Commended, J. Butler, Glasgow; J. Wallace.

POWTERS (Cocks, Any other colour).—First, J. Luis, Edinburgh. Second, J. Wallace, Glasgow. Highly Commended, M. Stuart, Glasgow; W. Geddes, Glasgow; J. Paul, Glasgow; J. Wallace. Commended, J. Muir, Glasgow. *Hens.*—First, W. Lightbody, Glasgow. Second, J. Muir. Highly Commended, W. Geddes.

CARRIERS (Any colour).—Prize, F. Else, London. Very Highly Commended, R. Fulton, London. Highly Commended, J. Muir, Glasgow.

CARRIERS (Black Cocks).—First and Second, T. Colley, Sheffield. Highly

Commended, J. Wallace, Glasgow. *Hens.*—First, W. B. Van Haansbergen, Newcastle. Second, R. Fulton, London. Highly Commended, T. Colley.

CARRIERS (Dun Cocks).—First, C. J. Samuels, Manchester. Second, T. Colley, Sheffield. Highly Commended, T. Colley; H. Yardley, Birmingham. *Hens.*—First and Special, T. Colley. Second, J. Muir, Glasgow. Highly Commended, F. Else, London; T. Colley. Commended, R. Fulton, London.

SHORT-PACKED TUMBLERS (Almonds).—First and Special, M. Stuart, Glasgow. Second, R. Fulton, London. Highly Commended, J. Wallace, Glasgow; G. Ure, Dundee.

SHORT-PACKED TUMBLERS (Mottles, Any colour).—First, G. Ure, Dundee (Black Mottles). Second, F. Else, London.

SHORT-PACKED TUMBLERS (Any other colour or marking).—First, J. Wallace, Glasgow (Kites). Second, M. Stuart, Glasgow (Kites).

BIRDS.—Medal, J. H. Frame, Carlisle.

BIRDS.—First, J. H. Frame, Carlisle. Second, W. B. Van Haansbergen, Newcastle. Highly Commended, H. Yardley, Birmingham.

FANTAILS.—First and Medal, F. Else, London. Second, G. Ure, Dundee. Highly Commended, F. Key, Beverley; W. B. Van Haansbergen.

JACOBIANS.—First, R. Pickering, Carlisle. Second, W. Nelson, Johnstone. Highly Commended, F. Else, London.

TRUMPETERS.—W. Powell, Belfast. Second, W. B. Van Haansbergen. Highly Commended, J. H. Frame, Carlisle.

TURBITS.—First and Medal, J. R. Rennards, Helensburgh. Second, H. Yardley, Birmingham.

OWLS.—First, R. Pickering, Carlisle. Second, F. Else, London.

NUMS.—First, F. Key, Beverley. Second, H. Yardley, Birmingham. Highly Commended, T. Short, Glasgow.

MAGPIES.—First, J. Sharp, Johnstone. Second, T. Short, Glasgow. Highly Commended, F. Else, London.

COMMON TUMBLERS.—First, J. Sephton, Prescot. Second, J. Sharp, Johnstone (Blue Beards). Highly Commended, T. Short, Glasgow (Black Bald Pates); J. R. Rennards, Helensburgh.

OTHER BREEDS.—First, J. Sharp (Blue Brunswicks). Second, A. Heath, Caine (Isabels). Third, C. J. Samuels, Manchester.

CANARIES.

EXTRA PRIZE (A Silver-plated Teapot for best Pair of Canaries).—Teapot, D. Duncan, Carron.

SCOTCH FANCY (Yellow Cocks).—First and Medal, G. Ayton, Glasgow. Second, A. Wilson, Wishaw. Third, T. Buchanan, Glasgow. Fourth, S. Brown, Glasgow. *Hens.*—First and Fourth, T. Buchanan. Second, J. Muir. Third, A. Wilson.

SCOTCH FANCY (Buff Cocks).—First, J. Smith, Dundee. Second, G. Ayton, Glasgow. Third, E. S. Wylie, Paisley. Fourth, M. W. Ruthven, Glasgow. *Hens.*—First and Medal, D. Duncan, Carron. Second, A. Kelly, Paisley. Third, J. Templeman, Glasgow. Fourth, M. Bell.

BELGIAN FANCY (Yellow Cocks).—First and Second, T. Buchanan. Third, J. Watt, Leith. Fourth, R. Forsyth, Edinburgh. *Hens.*—First and Sp., J. Watt. Second, S. Crawshaw, Loches. Third, R. Forsyth. Fourth, J. J. Garden, Aberdeen.

BELGIAN FANCY (Buff Cocks).—First and Fourth, J. Watt, Leith. Second, W. Jamieson, Glasgow. Third, S. Crawshaw, Loches. *Hens.*—First and Second, J. Watt. Third, W. Pitcaithly, Dunfermline. Fourth, R. Forsyth, Edinburgh.

PREBALDS, SCOTCH FANCY (Yellow Cocks).—First and Sp., A. Wilson, Wishaw. Second, S. Brown, Glasgow. Third, H. Fisher, Glasgow. Fourth, C. M. Williams, Glasgow. *Hens.*—First, J. Crawford, Belth. Second and Third, H. Newall, Glasgow. Fourth, C. M. Williams.

PREBALDS, SCOTCH FANCY (Buff Cocks).—First and Third, H. Newall. Second, H. Fisher, Glasgow. Fourth, N. M'Lean, Glasgow. *Hens.*—First, T. Christie, Glasgow. Second, D. Duncan, Carron. Third, H. Newall. Fourth, D. Stewart, Perth.

GOLDFINCH MULES (Yellow Cocks).—First, G. J. Barneby, Derby. Second and Third, W. Kirk, Dunfermline. Fourth, T. Doughall, Carlisle.

GOLDFINCH MULES (Buff Cocks).—First, G. J. Barneby. Second and Fourth, W. Kirk, Dunfermline. Third, T. Buchanan, Glasgow.

JUDGES.—*Pigeons:* {Mr. T. J. Charlton, Bradford, and Mr. J. Miller, Glasgow; Umpire, Mr. A. Cowan, Ayr. *Canaries:* Mr. R. Crawford, Kilbirnie; Mr. W. Ferguson, Belth; Mr. G. Masterton, Glasgow; and Mr. N. M'Lean, Glasgow.

KENT AND MAIDSTONE POULTRY SHOW.

THE show of cattle, sheep, pigs, poultry, wool, and roots, took place in the College Yard, Maidstone, on Tuesday, the 13th inst.

Spanish headed the list. There were four entries. The first prize was taken by a very fair pen; the next two pens were mongrels, and the fourth contained three small pullets. Of *Dorkings* there were three entries of old birds, most of which had sore hind claws; and ten entries of young birds, among which were some good birds. There were also two pens of *Dorkings* in the "Any other class," making in all fifteen pens of *Dorking* fowls. *Game* came next. There were seven pens of old birds, and six of chickens, all of which were *Reds*, and I noticed the winning birds were marked on the legs both with white and yellow tape, which is generally considered as a good reason for disqualifying them. *Hamburgs* were divided into *Golden* and *Silver*, and had one entry in each class; the pen of *Golden*, consisting of a *Black-breasted Spangled* cock, and two badly marked *Golden-pencilled* hens, while the *Silvers* were represented by a tolerable pen of *Spangled* birds. *Bantams* had two classes, old and young; two prizes in each class, and two entries in

one class, and three in the others. Four pens were Game Bantams, and one Black. The class for other breeds had five entries, three of Brahmas, one of Shanghaes, being a white cockerel and dark pullets, and a pen of coloured Dorkings.

Extra stock comprised a fine pen of single-combed White Dorkings, and three pens of Pigeons, a nice pair of small blue Owls, and two pairs of Fantails, one white, the other black.

Of *Turkeys* there were two entries, both by the same exhibitor. Of *Aylesbury Ducks* there were five entries, but some of the larger birds had stained bills. Ducks of other breeds mustered seven entries. A very pretty pen of Wild Ducks took first prize, a large pen of Greys with white flights was second, and a pen of Rouens commended. The remainder were imperfect Rouens.

It will at once be seen that Dorkings are the principal fowls shown, and the Committee should put them first, and give them most classes and prizes. Classes for White, Grey, and other coloured Dorkings would be better filled than those for Hamburgs. Game came second, and then Bantams.

Poultry was also exhibited the same day at Rye Cattle Show. I am very glad to hear of such exhibitions of poultry, but am quite sure we in the south require every such local show to improve our local fowls, to wit, Dorkings, whether White, Grey, Cuckoo, Speckled, or any other colour.—B. P. BRENT.

FOWLS FOR COLD WET DISTRICT.

ONE of your correspondents, a few weeks since, was inquiring for the most profitable sort of fowls. I suppose a good deal depends on climate and locality; but here, in our wet Lancashire, nothing succeeds so well as the cross-bred fowl, between the Spanish cock and the Golden Hamburg hen. The chickens are healthy, and easily reared; the pullets lay eggs equal in size and quality to the Spanish; they rarely want to sit; they are generally black, a good size, and handsome; and the cockerels are good for the table. In all respects I think them much better than the Pencilled or Spangled Hamburgs, which are not so hardy, lay smaller eggs, and not so many of them as the cross-breeds.—T. G.

BIRMINGHAM POULTRY SHOW.

ALTHOUGH the sales of poultry, in the office set apart for the purpose, were not quite so numerous as last year, they realised rather more money.

1884.			1883.		
Pens.	£	s. d.	Pens.	£	s. d.
Monday.....	154	616 17 6	163	661 12 6	
Tuesday.....	56	208 19 0	52	189 7 0	
Wednesday.....	38	141 12 0	25	70 2 6	
Thursday.....	25	100 0 0	40	133 13 6	
Total.....	273	1,066 8 6	Total.....	280	1,054 15 6
1884.			1883.		
Pens.	£	s. d.	Pens.	£	s. d.
1884.....	1,066	8 6	1884.....	273	
1883.....	1,054	15 6	1883.....	280	

Among the pens disposed of were Mr. Yardley's (Market Hall, Birmingham), first prize Buff Cochins pullets, for £20; Mr. Lawrence's second prize Yellow Jacobin Pigeons, for £20; Mr. James Wood's first prize Black-breasted Red Game, for £12 12s.; Mr. Elijah Smith's first prize Buff Cochins hens, for £12 12s.; Mr. James Wood's first prize Brown-breasted Red Game, for £12 12s.; Mrs. Seamons's first prize Aylesbury Ducks, for £12 12s.; Mr. Shorthose's first prize pen of Partridge-feathered Cochins, for £10 10s.; Miss Beldon's first prize Silver Polish chickens, for £10 10s.; Mr. Jas. Fielding's first prize Spangled Hamburg chickens, for £10 10s.; Mrs. Hurst's second prize Silver-spangled Hamburg chickens, for £10 10s.; Mr. Aykroyd's first prize Duckwing Game, for £10 10s.; Mr. Cock's Black-breasted Red Game (single cocks), for £10 10s.; Mr. Swift's Game Bantams, for £10 10s.; Mr. Hulbert's Rouen Ducks, for £10 10s.; Miss Biggar's first prize Spanish pullets, for £10; Mr. Bates's commended Buff Cochins hen, for £10; Mr. Bishop's commended Buff Cochins cock, for £10; Mr. Poole's first prize Partridge-feathered Cochins cock for £10; Mr. Kelleway's first prize Game Bantam cock, for £10; and Mr. Postan's highly com-

mended Game Bantams, for £9 9s. Fifty other pens sold for sums varying from £8 10s. to £5.

We append a statement of the aggregate of the sales during the last twelve years:—

1853.....			£1,235	4	6
1854.....			1,219	13	10
1855.....			1,145	8	8
1856.....			999	0	6
1857.....			804	17	0
1858.....	294 pens		945	12	6
1859.....	192	"	855	1	9
1860.....	203	"	831	0	0
1861.....	186	"	705	1	0
1862.....	210	"	741	17	7
1863.....	280	"	1,054	15	6
1864.....	273	"	1,066	18	6

The Stewards for this department were G. C. Adkins, Esq., Messrs. F. Sabin, W. Lort, jun., and Mr. W. B. Mapplebeck, and their duties were discharged in a very efficient manner. The latter gentleman also undertook, and zealously performed, the very arduous task of superintending the reception of the birds and the dispersion of them to their several destinations. No sooner were the doors of the Hall closed on Thursday evening than this work commenced, and was continued, with scarcely any intermission, through the night, so that by ten o'clock on Friday morning the entire 1,677 pens of poultry, and the 290 pens of Pigeons, had either been despatched to the several railway stations, or were ready for delivery to such local exhibitors as had arranged to call for them. The promptitude and ability with which the complicated regulations for the accomplishment of this removal were carried out, entitle Mr. Mapplebeck to the warm thanks of the exhibitors.—(*Midland Counties Herald*.)

SATINETTE PIGEONS.

I AM much obliged by Mr. H. Noye's explanation respecting the pretty Satinettes, but he seems to disregard the distinction between a variety and a breed. The difference may be a trifle, yet it makes all the difference between us. I am quite willing to admit them as a distinct variety, but of the same breed as Turbits—in fact, a distinct variety of the Turbit-breed or kind. How far they may be superior to the other varieties of Turbits must remain a mere matter of private fancy.

A correspondent who has bred them informs me he paired a Satinette with a Turbit, and the produce were to all intents Turbits. Change of colour, the addition of a turned crown, or a few feathers on the feet is not enough to constitute a distinct breed or sort.—B. P. BRENT.

REGICIDE AMONG BEES.

I AM very glad that "A LANARKSHIRE BEE-KEEPER" has again directed attention to this interesting subject. It is all very well for such *ad captandum* writers as Dr. Cumming to exclaim "that bees are regicides is not true. They never kill their queen; they love and are loyal to her, and obey her commands," and so on through a mortal *Times* column, of what one of his reviewers happily styles "a mellifluous compound of nonsense and error;" but the fact unfortunately remains that bees are sometimes provokingly apt to slay their queens, and it is only by directing the attention of apiarians generally to the subject, and by carefully collecting and comparing facts and observations bearing upon it, that we can hope fully to investigate, and, perchance, even to explain what now appears a most inexplicable and unsatisfactory chapter in the natural history of the honey bee.

Taking Huber for my guide, whenever I discovered a queen imprisoned in a knot of workers I used to fancy that she must either be a stranger, or at least a supernumerary queen produced in the same hive; and I well remember, on first finding a young imprisoned queen in a small queen-rearing box or nucleus, the long and unavailing search I at once made in the hope of discovering a second princess. On another occasion of the same kind I fancied the juvenile queen must have mistaken her hive in returning from a nuptial trip, and, therefore, having released her from her sister's pitiless embrace, I thought I could promptly and safely resolve my doubts by introducing her to a single worker from the neighbouring colony, to which I fancied

she belonged. The solution was certainly prompt, but could scarcely be deemed satisfactory, since in little more than a second the unfortunate queen lay in the agonies of death, having been instantly stung by the strange worker to which she had been so inconsiderately introduced. Here, then, was another blow to my faith in the infallibility of Huber, who declares that "the workers at no time will attempt to employ their stings against a stranger queen."

In process of time I became aware that queen bees were really liable to hostile attacks by their own workers, such attacks assuming the form of rigorous imprisonment in a dense cluster of their rebellious children; and at length I witnessed several instances which I have already related, and in which these incarcerations terminated fatally in the case of young and perfectly fertile queens.

Although I had ascertained that princesses were very liable to these attacks on their return from their wedding flights, I was long under the impression that in their case a fatal termination was not to be dreaded, and even went the length of imagining that a brief period of imprisonment might possibly be beneficial.

Revenons à nos moutons. Where was I when I digressed? O, saying that I had fancied that a fatal termination of a regicidal attack on a princess was not to be dreaded. But before relating the facts which have this season awakened me from my dream of security, permit me a few words in reference to the hypothesis submitted by your esteemed Lanarkshire correspondent, and which hypothesis these facts will, I fancy, go far to disprove. It may be remembered that the idea that regicidal attacks might be initiated by stranger bees has been already promulgated in these pages by that careful and accurate observer "E. S.,"* and as coming from such a quarter it is undoubtedly well worthy attention. Still, I am bound to say that, so far as my observation extends, I have never met with an instance in which I could trace a regicidal attack to the presence of stranger bees. When these are introduced in large numbers, as in uniting stocks in autumn, the risk is undoubtedly great, and the queen not unfrequently falls a victim to the involuntary invasion; but so far as my experience extends, mere robber bees neither molest nor pay the slightest attention to the native queen. In those instances which I have witnessed she has passed totally unregarded, the marauders appearing too intent on plunder to take the least notice of her. In some cases it may, of course, be different: I can only speak of what I have myself seen.

But to return to the experience which completely upset all my preconceived notions with regard to what I had supposed to be the innocuous if not actually beneficial imprisonment of youthful queens. On the 20th of last June, when honey was so plentiful that no bee would dream of pilfering from others what she could so readily collect for herself, I opened a small nucleus-box, and found the young queen absent. During my examination she returned with evident signs of impregnation, and was instantly seized and imprisoned in a dense knot of workers. Having released her from her persecutors, I closed the box and let her fly. She returned to the hive's mouth, where she was instantly seized by one of the sentinels, but broke away from it and flew off again. The same thing was repeated once or twice, but ultimately she eluded the guard and slipped into the hive. As the day advanced I inferred from the restless demeanour of the workers that she was again in durance; and as on examining the hive in the evening this proved to be the case, I thought I would err on the side of caution by ensconcing her in a queen-cage within the hive itself until the next day, when on her release she was well received, and remained without further molestation. Subsequent events make it probable that she owed her life to my precaution.

Later in the summer I missed a young queen, and ultimately discovered her lifeless on the ground immediately in front of her hive, and in that shrunk and distorted condition which marks the hapless victim of a regicidal attack. I could not by the closest examination discover any sign of impregnation; but I had little doubt of her having been destroyed on her return from an excursion, whilst her demise was at any rate a fatal blow to my pretty theory of beneficial imprisonment. I had not long to wait for something even more conclusive.

* Vide JOURNAL OF HORTICULTURE, Vol. VI., page 67.

At this time I possessed a young Italian princess, with which I was absolutely in love. She was not remarkably large, but in colour, grace, and symmetry I have rarely beheld her equal. Whether within the hive or on the wing she was equally lithe and agile, and she was accordingly watched with an admiring interest accorded to but few of the inhabitants of my apiary. One day I was somewhat startled at finding in her hive that horrible little knot of workers, with whose appearance I am unfortunately but too familiar. Warned by the misfortune which I have just related, I determined to leave nothing to chance, and having thus caught them *in flagrante delicto*, I congratulated myself on being, as I supposed, in time to save my especial little pet from the fate which had only a few days before overtaken her unfortunate sister. Judge, then, of my mortification on gently dispersing the cluster at finding its nucleus to consist only of the poor shrivelled and distorted carcase of my so recently beautiful queen! On examination I had the additional mortification of finding conclusive evidence of a successful wedding trip, so that it became apparent that my hopes had indeed been blasted in the very moment of their fruition.

In neither of the instances above related can I discern anything to countenance the hypothesis, that regicidal attacks are initiated by robbers. It is true, that in the first case the hive was open at the commencement, but not only was no plundering perceptible, but, as stated before, I do not believe there was such a thing as a robber bee at that season of plenty; and even setting this aside it will scarcely be maintained that the sentinels at the entrance by whom the queen was afterwards repeatedly assaulted belonged to the marauding fraternity. In the other case I can only say, that I could discover no appearance of an attack by robber bees, and that I am satisfied that none had taken place.—A DEVONSHIRE BEE-KEEPER.

SWARMING VERSUS DEPRIVING.

My experience does not all coincide with that of your correspondent "J. E. B.," who at page 444 seems to imply that allowing stock-hives to swarm increases their honey store; the inverse of this rule holds good with us. Surely the queens of the storified hives must have been worn out by age, or there was something radically wrong with the management of these hives, when such an invidious comparison could be drawn.

Acting on the principle that union is strength, both of population and honey store, the escape of a swarm from a depriving-hive, despite the best efforts to avert it, is looked upon as a great misfortune by us northerners, and it is at once returned, should it stubbornly refuse to remain, even though royal cells be destroyed. The queen herself is often sacrificed, so as to keep up the population; but if the swarm is hived another prime one is as soon as possible procured and added to the emigrants, with the view of combining a sufficient force for the getting up or completing supers.

No better proof of the success of the "conservative principle" need be looked for than the interesting report of that thoroughly practical conservative bee-master Mr. S. Bevan Fox, "My Apiary in 1864," published in a recent Number.

I made an involuntary convert to the depriving system this year as follows:—A most enthusiastic bee-keeper in this quarter, of the old swarming school, who usually spares neither time, trouble, nor sugar, to have the honour of hiving the earliest swarm in the district, was left behind this season, and chancing to meet me was lamenting over his bad luck. He told me he had kept a swarm in one Stewarton octagon box purposely to have an unusually early swarm; the bees had been long "lying out," but somehow or other would not come off. He was not a little surprised on my telling him that his anxiety to effect his desire was in all probability the cause of its frustration. It was more than likely that the queen, in the small area of available comb in a single Stewarton had not room sufficient to unburden herself of her eggs, so as to fit her to be in a condition to fly off with the longed-for swarm. In addition, he was a considerable loser by allowing his bees to hang out idle during the then capital honey-gathering season. Beaten as he was, he thought he could not do better than

follow my advice of giving a second breeding-box below at once, shortly thereafter a honey one, and further breeding-space gradually as the stock might require it. The result was his taking off a splendid super of clover honey, and a second beautiful one of the gleanings of the heather and on its return from the moors a very heavy stock. On showing me with pride the last of these trophies, he told me as long as he kept bees he would never allow a hive to swarm, to which resolution I made the addendum always providing he kept his queens young and vigorous, for which additional hint he expressed his further acknowledgements to—A RENFREWSHIRE BEE-KEEPER.

WILTSHIRE BACON VERSUS HERTFORDSHIRE BACON.

SOME weeks ago I read in your paper how to make bacon by a "WILTSHIRE RECTOR." Now, I know better; and what your Rector tells us to do about letting out the brine by a hole in the corner of the tray, taking out the bacon when cured, rubbing it with bran, and hanging it in the kitchen, you may just as well rub it with a brickbat and hang it in the sun. If you want good bacon, do as I do, place your side of a good-sized pig in your tray. If it weighs 50 lbs., take of common salt 2 lbs., bay salt 2 lbs., saltpetre 4 ozs., mix these salts well together and rub the mixture in thoroughly. This is the first day's work. The second day take 1½ lb. sugar and half a pint of vinegar, boil them together and pour on to your bacon, as is to be, hot, then rub the salts and the vinegar and sugar well in. Do this and turn the sides every day for a month, never let off the brine, then take them out and smoke them gently in wood smoke for three weeks. If my bacon does not beat the Wiltshire out and out, I am not—SALLY GRISKIN.

P.S.—Some people like their bacon hogs singed. My grandfather, a Berkshire man, would insist that no bacon was good unless the hogs were singed. He was a blue-eyed old Saxon, and like all of that race hard to move. I believe there is no occasion to singe bacon hogs. My neighbour, the doctor's wife, a Warwickshire lady, tells me they never use sugar in curing their bacon in the north, and never smoke it, drying it in the kitchen. Nasty stuff, I say.

CURING BACON.

ANOTHER inquiry concerning bacon! and from "Ballinasloe," in the land of Bacon! I shall henceforth attach a more literal meaning (not indeed forgetting the figurative), to the phrase, "Every man wants to save his bacon."

Matters relating to food must always be ranked among important matters. Thus an army kept on short rations for a week would be beaten by an inferior force of well-fed—say bacon-fed, to the last hour.

In replying to my Irish correspondent, I would say first, that much depends upon the pig. Not to take the extreme case, that without a pig there would, manifestly, be no bacon at all; but with an inferior pig, inferior in breed and feed, the bacon will be inferior too.

I would presume, then, that my inquirer has nothing to do with the Irish pig described in a book lying before me, in these not favourable words. "In Ireland the native pig is tall, long-legged, bony, heavy-eared, coarse-haired, and by no means possessing half so much the appearance of domestic swine as they do of the wild boar." I remember seeing large droves of such pigs five and twenty years ago, but I hope they are no more visible anywhere.

The best pig for a gentleman's pig—i. e., where not wanted of a large size, is the Berkshire, very slightly crossed with the Chinese. I began with the rule of killing when the supposed weight was eight score pounds, but now that little mouths begin to be larger mouths, I kill at nine score.

As to the component parts of the pickle. We use a stone of salt for the whole pig of nine score including hams, faces, &c., and 1 lb. of saltpetre; nothing else whatever is used for the fitches.

A person accustomed to salting bacon soon sees, so my cook informs me, when the meat will take in no more salt. True Wiltshire people use no other ingredients even for the

hams, but usually they are cured more highly, viz. any cookery book at hand, and choose the receipt most pleasing.—WILTSHIRE RECTOR.

LARGE IMPORTATION OF EGGS.—The enormous number of 291,597,240-eggs has been imported into this country in the first ten months of the present year!—not very far from a million a-day.

OUR LETTER BOX.

DARLINGTON POULTRY SHOW.—I have received a Game cock from the Darlington Show which does not belong to me. If the owner will write and describe the bird I shall be happy to send it to him.—HENRY HAWES, Lower Broughton, Manchester.

CHARACTERISTICS OF BLACK HAMBURGERS (Cornish Subscriber).—The shape and comb should be the same as the other varieties of this breed. The deaf ear should be quite white, the face should not.

GAME COCKEREL CROWING (J. F. S.).—Although at the age of four months some cock chickens make a sort of noise that may by courtesy be called crowing, yet it is nothing extraordinary that a bird two months older should be silent. The Game are the likeliest to crow early, and the bird in question may have crowed many times without having been heard.

DISEASED FOWLS (Lady Subscriber).—We fear your fowls have the welp. If there are but few cases separate the sick from the healthy, and give Baily's pills. If all are affected, and you have too many to treat as individuals, give stimulants—strong beer is the best, and put camphor in all their water.

TAMING PARROQUETS (Idem).—We have the small Parroquets, if you mean the Undulatas, perfectly tame, and have never had any difficulty with them. We have constantly seen them at liberty flying about in rooms. A tuft of growing grass is a bribe they can never resist, and they will go anywhere for it.

DIARRHOEA IN COCHIN-CHINA FOWLS (H. W.).—You must continue the purging till the evacuations assume a natural and healthy state and colour. Feed on the most nourishing things, as oatmeal, but very little at a time. Discontinue the cabbage and Indian corn. We have little doubt the has picked up something that is injurious if not poisonous; but castor-oil will carry it off if persevered in.

COCK'S LEG ULCERATED (Lenton).—We know no poultry doctors. If the bird keeps in good condition you will only have to wash the wound constantly, and keep it dressed with citric ointment as soon as the discharge diminishes. Generally speaking, these affections of the leg are the precursors of fatal maladies; but in these instances they are accompanied by shrivelling of the limb and wasting of the body. The absence of these symptoms in your case would seem to point to an accidental cause for the ailment.

TURBIT PIGEON AFFECTED WITH COLD (M. A.).—To administer cod-liver oil to Pigeons, mix flour or meal with the oil to a stiffish paste, roll it into pellets, and give the bird one every twelve hours. The pellet will be more easily swallowed if a few drops of water are first put into the bird's mouth.—B. P. B.

SILVER-GREY RABBIT SKINS (Coney).—Refer to the London list of furbriers and write to some of them if you have a dozen or more skins.

CANARY (W. B. A.).—As the bird becomes dull and heavy, and his feathers ruffle only when hung from the curtain-pole near the window, it is very probable that the fumes of the gas collect there during this season, as the heated fumes rise to near the ceiling and rush to the coldest part of the room. Let the cage be suspended in a warmer part of the room, and lower from the ceiling.

CANARIES MOULTING (Canariensis).—1st, Canaries occasionally lose their voice from cold. Benefit may be derived from dissolving Spanish liquorice in his drinking-water. 2nd, Maw seed—that is, poppy seed, is generally much relished by the birds, and I think it much more conducive to their health than hemp or rape seed. 3rd, Bread is not injurious, and you may let your bird eat as much as he likes. 4th, To cut the bird's claws, take him in your hand, and looking through the nails to see how far the quest extends, then cut off the remainder with a sharp pair of scissors.—B. P. B.

SUPERSTITIONS ABOUT BEES (J. Jackson).—Your letter is written in a good spirit, but is totally at variance with our own experience, and the experience of all aparians. We are very glad that you derive assistance from our pages.

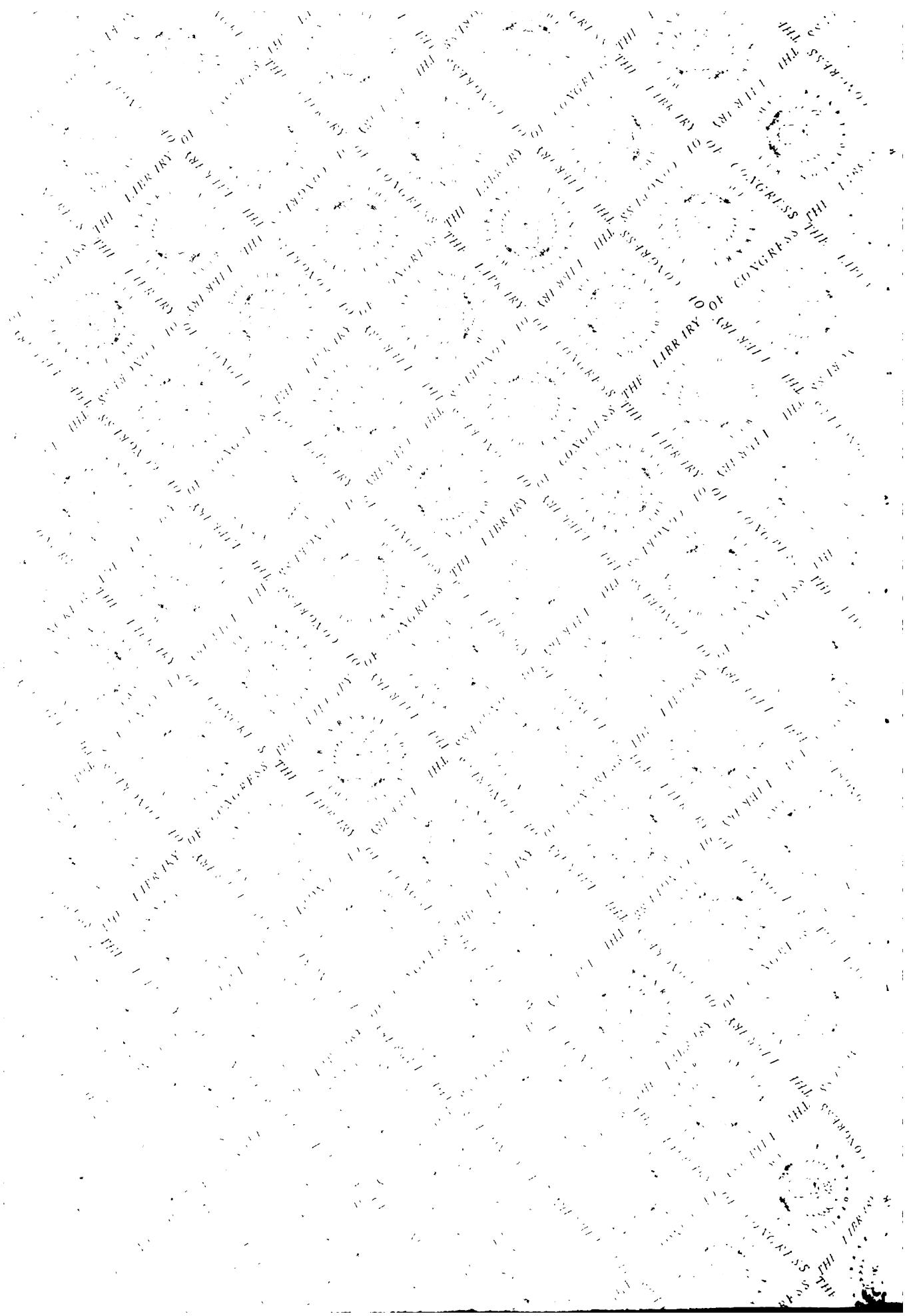
LONDON MARKETS.—NOVEMBER 21.

POULTRY.

The character of the Christmas market of late years has been almost monotonous—few first-class goods, they consequently make good prices; large quantities of inferior poultry, which finds a sale with difficulty, and is evidently remunerative from the fact it is persevered in. During the first few years of the Goose clubs the supply of these birds was inadequate, they therefore made very large prices. There are plenty of them now, but they sell well. One man sends up many thousands. Poultry is in the ascendant during this week in Sussex, Essex, Norfolk, Suffolk, Lincolnshire, and many parts of Ireland, Scotland, France, Holland, and Belgium. From the various points all come to Leadenhall as their common centre, and the market during this week is a perfectly unique sight. We do not quote Turkeys. If of good quality they are like meat, and valuable, according to weight, rising rapidly after the limit of eighteen pounds is passed.

	s.	d.	s.	d.		s.	d.	s.	d.
Capons.....	7	0	11	0	Grouse.....	0	0	0	0
Large Fowls.....	4	0	5	0	Partridges.....	1	9	0	0
Smaller do.....	3	0	3	6	Hares.....	3	0	0	0
Chickens.....	1	9	2	0	Rabbits.....	1	4	0	0
Geese.....	6	0	9	0	Wild do.....	0	9	0	0
Pheasants.....	3	0	3	0	Pigeons.....	0	10	0	0

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